A COMPUSERVE PUBLICATION PRINTED MONTHLY/ONLINE DAILY

ONLINE TODAY

THE COMPUTER COMMUNICATIONS MAGAZINE

July, 1986 $2.50

Gateways
Technology's Librarian

Cellular Modems
Information on the Move

Foreign Connection
Online from Overseas

"Fast and powerful... like NewsNet."

"Some kind of fancy import?"
"Made in the U.S.A. NewsNet is my online business news service with round-the-clock access."

"Power steering?"
"Power everything, with NewsNet."

Once I'm online with NewsNet, I have access to over 300 business journals, as well as wire services, credit reports, stock quotes and airfares. I just tell NewsNet to SEARCH, if I'm looking for a certain topic, SCAN, if I want to read headlines, or READ, if I want to read articles or reports. Every day, I make better business decisions because of NewsNet.

"How well does it respond?"
"I've got fingertip control."

NewsNet gives me NewsFlash, the electronic clipping service that automatically keeps an eye open for my key business interests. It constantly scans the 3,000 articles that enter NewsNet every day, retaining all the important stories. Every time I sign on, new articles are waiting for me. I don't waste a minute getting the news I need.

"Tell me about financing."
"You won't need to visit the bank."

I subscribe to NewsNet for only $15 a month, plus online charges that start at $24 an hour. Since the average newsletter costs $200 a year in print, I have access to over $60,000 worth of business news through NewsNet. For businesspeople who want to stay well-informed, NewsNet can't be beat.

NewsNet and NewsFlash are registered service marks of NewsNet, Inc.

Take NewsNet out for a test drive.
Subscribe now or call for our brochure.

800-345-1301

(in PA 215-527-8030)

NEWSNET

GO EBB or circle 1 on the Reader Service Form.

CompuServe. The shortest distance between you and Wall Street.

Get all the facts as fast as the experts do.

More and more individual investors are making their investment decisions the same way Wall Street's most prestigious firms do. With CompuServe—the fastest, most reliable source of comprehensive financial data available.

And they're finding out how easy it is! In a matter of seconds you can check out a tip or find a money-making lead. Investigate any area of interest. Or scan CompuServe's financial news highlights to find new areas to investigate.

CompuServe does it all! With information as current as the big board. Including:

Continuously updated quotes on over 10,000 issues.

MicroQuote II—12 years of daily historical prices, along with dividends, splits, distributions and interest payments on more than 90,000 stocks, bonds, mutual funds, options, foreign exchange rates and hundreds of market indexes.

Graph trends quickly and online. Review your portfolio performance, investigate returns in bull and bear markets. Screen for stocks to buy or transfer prices and dividends to your microcomputer for detailed analysis.

Standard & Poor's descriptive information on over 3,000 companies.

Value Line Data Base II—extensive, fundamental data for analyzing the performances of over 1,800 major corporations.

Disclosure II—descriptive and financial information from the SEC filings and annual reports of over 8,500 companies.

Institutional Broker's Estimate System (I/B/E/S)—earnings projections from top research analysts on over 3,000 widely followed companies.

The World of Lotus is full of useful and timely information about Lotus-related products such as 1-2-3, Symphony and Jazz. Maintained by Lotus.

You can also research technical market trends, review economic projections and high-powered market analyses. Get expert advice on retirement, financial planning, managed accounts, taxes and insurance. Evaluate your own portfolio, even connect to a variety of at home banking and brokerage services.

And all this comes with CompuServe's base of news, weather, travel, electronic mail, special interest and entertainment services.

Compare CompuServe's rates to the cost of expensive floppy-based sources. Compare our up-to-the-minute delivery to time-consuming publication research. Compare the depth and breadth of CompuServe's virtually infinite databases to any other source of investment information.

Then see your nearest computer dealer for a CompuServe Subscription Kit or order direct. Suggested retail price is only $39.95 and includes $25 of free online time. And if you use CompuServe to manage your investments, the entire subscription cost may be tax deductible.

For more information or to order direct, call or write:

Name _____

Address _____

City _____

State _____ Zip _____

CompuServe®

Information Service, P.O. Box 20212,
5000 Arlington Centre Blvd., Columbus, OH 43220

800-848-8199

In Ohio, call 614-457-0802

An H&R Block Company

Lotus, 1-2-3, Symphony and Jazz are trademarks of Lotus Development Corp.

GO EBB or circle 2 on the Reader Service Form.

CONTENTS

PRINT EDITION

FEATURE

10 ***Gateways:*** *Logging on to Online Libraries*
The latest innovation in online communications lets computer users easily retrieve information from databases once used only by professional researchers.

UPDATE

18 ***The Foreign Connection:*** *Getting Online from Overseas*
CompuServe subscribers traveling abroad can access CompuServe through a web of international computer data networks.

BUSINESS

24 ***Cellular Modems:*** *Making CompuServe Accessible Anywhere*
Not limited to use by limousine riders, cellular technology enables executives away from the office to access data.

REVIEWS

28 ***Hardware***
Datavue MS-DOS *portable computer from Quadram Corp.*
Amdek Color 722 *monitor from Amdek Corp.*
Votrax *personal speech system from Votrax Inc.*

32 ***Software***
V-P Planner Lotus 1-2-3 *emulator from Paperback Software*
Mutual Fund Investor *investment management software from American River Software*
VideoWorks *animation program from Hayden Software Co. Inc.*
Color Magic *color graphics utility from Lifetree Software Inc.*
Fact Cruncher *outline processor from InfoStructures Inc.*

38 ***Books***
Robotics *— TAB Books*
Networking: An Electronic Mail Handbook *— Scott, Foresman and Co.*
Connections: Telecommunications on a Budget *— Scott, Foresman and Co.*
Computer Entrepreneur *— Computer Information*

DEPARTMENTS

3 Dear Reader
5 Letters
6 Monitor
16 *Beginner's Corner* with Alex Krislov
20 *Inside The Electronic Mall*
21 *New Products*
22 *Answers from Customer Service*
22 *Gift of Time Essay*
27 *Business Briefs*
44 *Industry Watch*
46 *Shopper's Guide*
48 *Online* with Charles Bowen

ELECTRONIC EDITION

Online Today Electronic Edition provides daily-updated computer and information industry news, coverage of CompuServe services, commentary, computer product reviews and more. To access the *Electronic Edition*, type GO OLT at any CompuServe prompt.

GO OLT **A GO-page directory** *of the day's top computer industry news and a summary of key OLT page numbers.*

OLT-160 **The Monitor Daily News** *main menu.*

OLT-90 **Today's computer and information industry news.**

OLT-20 **The current week's Monitor news.**

OLT-130 **Behind the Screens.** *Computer and information industry news, rumor and gossip.*

OLT-50 **CompuServe Update** *main menu. Lists all CompuServe news departments.*

OLT-70 **What's New on CompuServe.**

OLT-80 **CompuServe Community News.**

OLT-120 **Forum Conference Schedules.**

OLT-140 **Beginner's Corner.**

OLT-3500 **Online With Charles Bowen.**

OLT-1000 **Computer Events Calendar.**

OLT-2000 **OLT Special Reports.**

OLT-3000 **Computer Legislation Database.**

OLT-30 **Letters to the Editor** *main menu.*

OLT-200 **Electronic Edition Reviews** *main menu.*

OLT-220 **Hardware Reviews** *main menu.*

OLT-230 **Software Reviews** *main menu.*

OLT-240 **Book Reviews** *main menu.*

OLT-250 **New Product Announcements** *main menu.*

EBB-11 **Instructions** *on use of the Electronic Bounce Back reader service system.*

EBB-160 **Online Today Display ads** *main menu.*

EBB-70 **Shopper's Guide.**

DEAR READER

Online Today™**, July 1986**
Volume 5 Number 7

Publisher
Calvin F. Hamrick III
Editorial Director
Richard A. Baker
Editor
Douglas G. Branstetter
Art Director
Thom Misiak
Managing Editor
Mary Mitchell
Contributing Editors
Charles E. Bowen, Cathryn Conroy, John Edwards, Carole Houze Gerber, Ernest E. Mau, Byron T. Scott
Copy Editor
Kacy Cook
Assistant Editors
Richard Brownewell, Robert Loomis
Production Assistants
Chris Moore, Susan Toombs

ADVERTISING SALES
National Sales Manager
Stephen J. Peters, 5000 Arlington Centre Blvd., Columbus, OH 43220; 614/457-8600
Northeast Garland & Associates, 10 Industrial Park Rd., Hingham, MA 02043; 617/749-5852; Pete Hardy
Mid Atlantic Nelson & Ross Associates Inc., 55 Scenic Dr., Hastings-on-Hudson, NY 10706; 914/478-0491; Bonnie Nelson, Kaja Ross
Southwest Marketing Communications, Woodland Professional Building, 3545 E. 51st, Suite 11, Tulsa, OK 74135; 918/747-1700; Jack Cozier, Carolyn Harrison
South Marketing Communications, 12339 Lima Dr., Houston, TX 77099; 713/495-3288; Max Nelson
Southeast Fox Associates Inc., Suite 200, Building E, 5775 Peachtree Dunwoody Rd. N.E., Atlanta, GA 30342; 404/252-0968; Rick Gower
Midwest Kingwill & Krukowski Inc., 4433 W. Touhy Ave., Chicago, IL 60646; 312/675-5755; Dave Kingwill, Edward Krukowski, Baird Kingwill
Northwest Fox Associates Inc., 870 Market St., San Francisco, CA 94102; 415/989-5804; Stephen E. Schwanz
West The Faust Co., 24050 Madison St., Suite 100, Torrance, CA 90505; 213/373-9604; Richard Faust, Doug Faust, Robin Faust

MPA

BPA
SELECTED MARKET AUDIT DIVISION

President and Chief Executive Officer Charles W. McCall, **Executive Vice President, Computer Resources** Alexander B. Trevor, **Senior Vice President** George M. Minot, **Vice President, Business Support and Development** Barry F. Berkov, **Vice President, Research and Development** Douglas P. Chinnock, **Vice President, Product Management** Maurice A. Cox Jr., **Vice President, Network Operations** William G. Duvall, **Vice President, Product Development** William J. Kuehnle Jr., **Vice President, Direct Sales** Robert J. Massey, **Vice President, Market Development and Services** John E. Meier, **Vice President, Human Resources** Judy K. Scheck, **Vice President and Controller** Jeffrey T. Weisner, **Vice President, Telecommunication Services** G. Clark Woodford

Online Today is published monthly in the United States of America by CompuServe Incorporated, 5000 Arlington Centre Boulevard, Columbus, OH 43220. Application to mail at Second-Class postage rates is pending at Columbus, Ohio, and additional mailing offices. POSTMASTER: Send address changes to *Online Today* Reader Administration, P.O. Box 639, Columbus, OH 43216-0639. Copyright ©1986 by CompuServe Incorporated. All rights reserved. Contents may not be reproduced in whole or in part without written permission of publisher. *Online Today* is a registered trademark of CompuServe Incorporated. Printed in U.S.A. by R.R. Donnelley & Sons Company, Chicago. Subscriptions: U.S., AFO — $30 one year; Canada and elsewhere $40 one year. Single copies $2.50 in U.S., AFO and Canada. Telephone: 614/457-8600. *Online Today* assumes no responsibility for return or safety of unsolicited matter. Direct editorial correspondence to: Editor, *Online Today*, P.O. Box 20212, Columbus, OH 43220. Advertising Reader Service: Reader Service Management Dept., P.O. Box 376, Dalton, MA 01227-0376.

Although online data libraries have been with us for some time, the ability to casually navigate between them from one access point is a fairly recent development. Today, the CompuServe Information Service and its continental network are leading the trend with gateway access to many other major online services and information banks. The CompuServe EasyPlex link to MCI Mail is an example of an ever-widening national information network shared by competing companies.

Many CompuServe subscribers have been using gateways, perhaps unaware that services such as the Official Airline Guide, TWA Travelshopper, PaperChase Medline, Comp-u-store and many banking services are on other systems removed from CompuServe's Columbus facilities, but connected via the company's network.

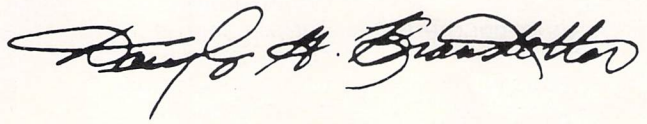
Now, there is a major new addition to CompuServe's menu of gateway services for data libraries. It's called IQuest™ and it's the focus of this month's cover feature on gateway services (page 10).

IQuest, a joint gateway project with Telebase Systems, Inc., provides access to more than 700 subject areas from top-notch database vendors such as DIALOG, BRS, SDC/Orbit, NewsNet and many more. Almost every conceivable research topic is available in this cornucopia of databases. *Online Today* Contributing Editor Charles Bowen, who conducts daily online research for OLT, said it best: "In terms of what is accessible online, the data five-and-dime just became a supermall with the flip of a switch."

* * *

CompuServe has a growing number of subscribers who access the Information Service from overseas. At *Online Today*, we often receive letters from outside North America asking for help in getting the familiar User ID: prompt in such far-flung places as Zambia, Saudi Arabia and the Philippines.

Some of our international subscribers and US citizens traveling abroad may find a digital lifeline in this month's Update section. "The Foreign Connection," (page 18) authored by *Online Today* European correspondent Ben Knox, outlines the practices and procedures of logging on from overseas.



Douglas G. Branstetter
Editor

Explore Exotic Online Destinations . . . Offline.

Keeping up with all of the offerings of the world's largest general information service is quite a challenge. New products are always arriving. It's been that way every month for years. And while you may have favorites, there are a world of other offerings you may have never visited.

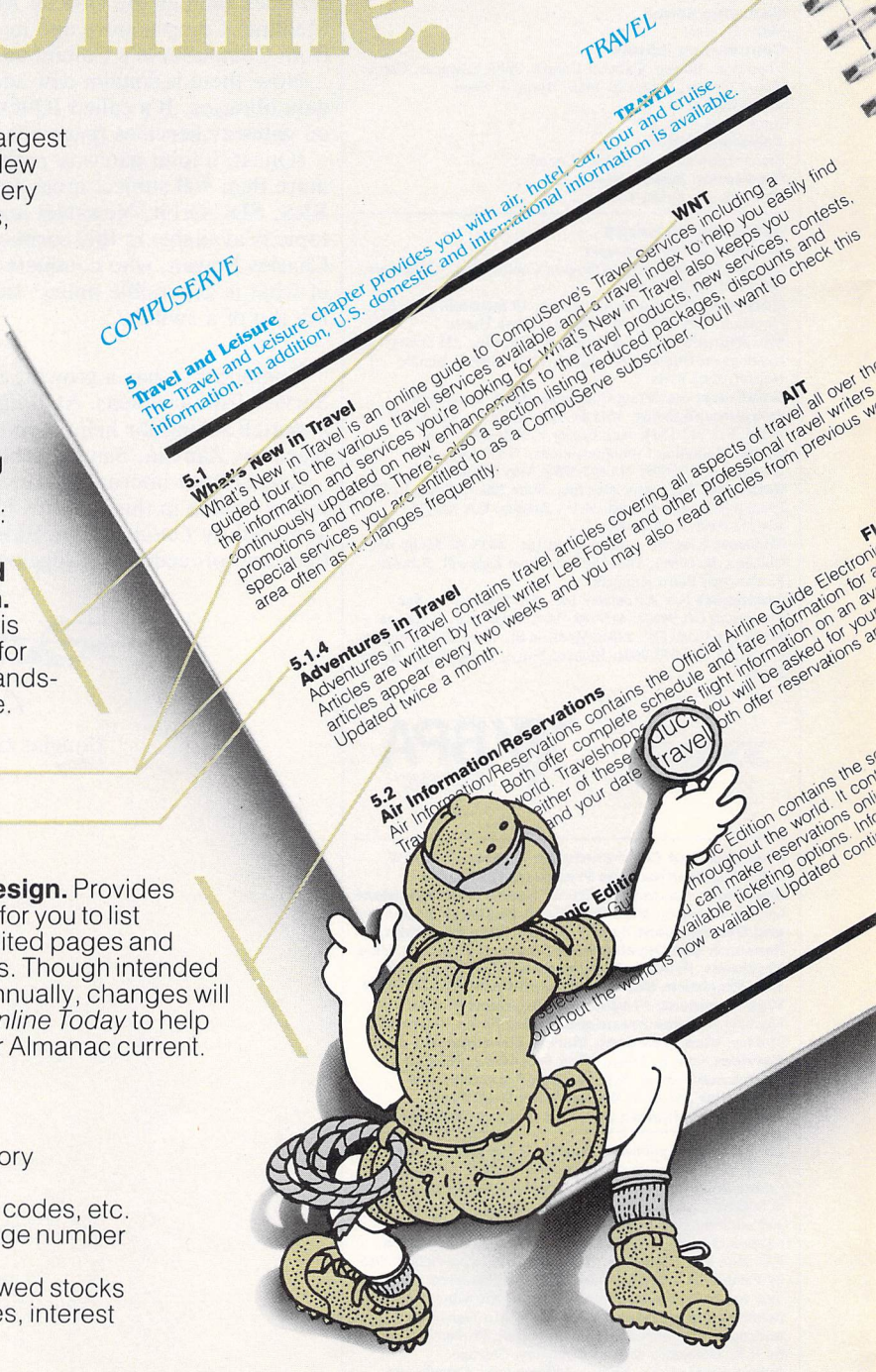
The CompuServe Almanac is for you. This handy publication gives you a chance to explore the products and services of the CompuServe Information Service—without picking up the tab for visiting them individually online. And it's loaded with helpful features that online adventurers will find invaluable when hiking through remotest CompuServe, exploring new terrain, or finding their way back to favorite places:

Comprehensive. Includes descriptions and Quick Reference Words for hundreds of products and services, along with indicators for products with special pricing.

Spiral-bound construction. The Almanac is spiral-bound for convenient hands-free reference.

Fully-indexed. Uses a numerical coding system to help map the relative position of products and product groups—providing users with a "sense of location" within the service.

Workbook design. Provides ample space for you to list frequently-visited pages and insert updates. Though intended for re-issue annually, changes will be noted in *Online Today* to help you keep your Almanac current.



Includes...

- a Table of Contents organized by product category
- an EasyPlex Address Book worksheet
- lists of abbreviations for state codes, airport city codes, etc.
- an alphabetized product index with Almanac page number and Quick Reference Word
- listings of popular mutual funds and widely-followed stocks
- access symbols for market indexes, commodities, interest and currency exchange rates

***Well not exactly. But the Almanac *is* being offered at a special introductory price of $9.95—a small price to pay for a great way to save.**

To order your Almanac type GO ORDER at any ! prompt. Nonsubscribers may order by calling 800-848-8199. In Ohio or Canada call (614) 457-0802.

CompuServe®

5000 Arlington Centre Blvd.
Columbus, Ohio 43220

An H & R Block Company

LETTERS

Reviews Disputed

I must take exception with the review of DoctorDOS in the May issue. The reviewer appears to fail to grasp the concepts of DoctorDOS in one instance and presents erroneous information in another. As a user of DoctorDOS from its first release (V1.0) to the present (V1.02), I would like to clarify this fine product.

DoctorDOS performs its "magic" by overlaying portions of both the MS-DOS core and BIOS in memory. The overlayed functions are those that are not as well optimized as they could have been by the original developers: This includes the screen routines mentioned in the article but also includes many non-disk DOS calls as well. The result is an increase of 100 percent in screen speed and as much as 500 percent on certain DOS calls. This can greatly increase the execution speed of many programs. Doctor DOS also eliminates flicker on dual-ported color video cards and static electricity lock-up on monochrome cards.

DoctorDOS works well with programs I have used including (and speeding up) many that make nonstandard calls and those that install their own keyboard and screen routines. However, one negative point not mentioned is that DoctorDOS does not support the CTTY Mode. Only one single-sided drive is needed for installation and use, not two as mentioned.

At $29.95 from the discounters — and *non-copy protected*, contrary to the claim in the article — DoctorDOS has been one of my better software buys and I highly recommend it. And no, I have no connection with the company producing it.

Tom Tcimpidis, President
TGT Technologies
Granada Hills, Calif.

As a scientist who subscribes to CompuServe in part because of the potential for conducting online research, I was very interested when I noticed that the April issue contained a review of a book, *Online Research and Retrieval with Microcomputers*. I became somewhat less than interested when I read the reviewer's disparaging remarks about the apparent fact that the book was written in a technical manner and ". . . oriented toward scientific and technical users of online databases, not the casual CompuServe browser."

The reviewer spent the whole review criticizing the book for how it looked and was organized. From the reviewer's description, it doesn't sound any different from many good technical books that I've read.

As for the last statement about the information being there but having to work hard at extracting it: we're used to working hard at extracting information. That's the nature of learning.

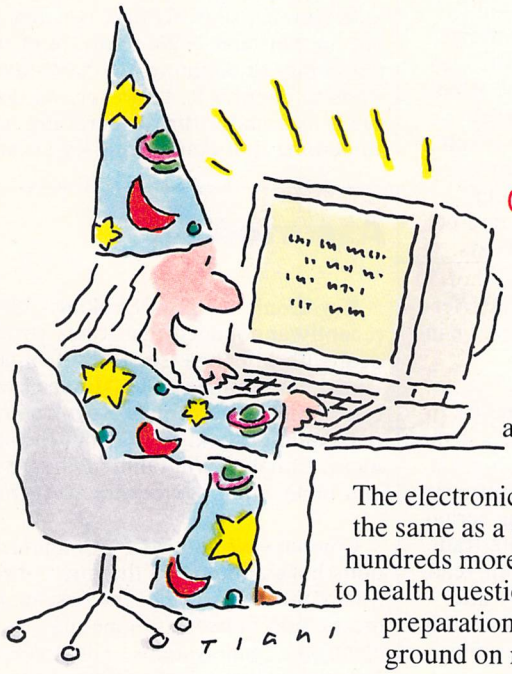
Glen Stumpff
Dayton, Oh.

Sports News

The May issue of *Online Today* features an Answer from Customer Service to a question about sports news services. The best place to find the latest news on all sporting events is the St. Louis Post-Dispatch. This source was omitted from the answer.

Neil Cumfer
Columbia, S.C.

Encyclopedia Electronica!



Grolier's Academic American Encyclopedia online through CompuServe.

The encyclopedia that's fun to use—for the whole family.

The encyclopedia that's always current—updated every 13 weeks.

The electronic encyclopedia that costs the same as a computer game, and has hundreds more uses—from homework to health questions, from trivia to travel preparation, from business to background on new topics, from special speeches to science facts.

Subscribe Today— GO AAE on CompuServe.

Unlimited Usage for Only $49.95 per year (Plus connect charges)

For the price of a computer game!

Also on CompuServe—GO EDU-6 to play **The Whiz Quiz*** ™ trivia game.

Grolier Electronic Publishing, Inc.
95 MADISON AVENUE, NEW YORK, NEW YORK 10016

*The Whiz Quiz Trademark of Grolier Electronic Publishing, Inc.

GO EBB or circle 3 on the Reader Service Form.

Satellite Data in Peril?

As more companies use satellites to deliver electronic mail, stock quotes and other data, concern is growing that terrorists, system crackers, unscrupulous competitors and other troublemakers could jam these signals, resulting in disrupted data and serious harm to both the reputation and finances of the information provider.

The idea isn't as far-fetched as it sounds. Last February, the Federal Communications Commission warned satellite service providers that such a situation not only is possible, but it may already have occurred.

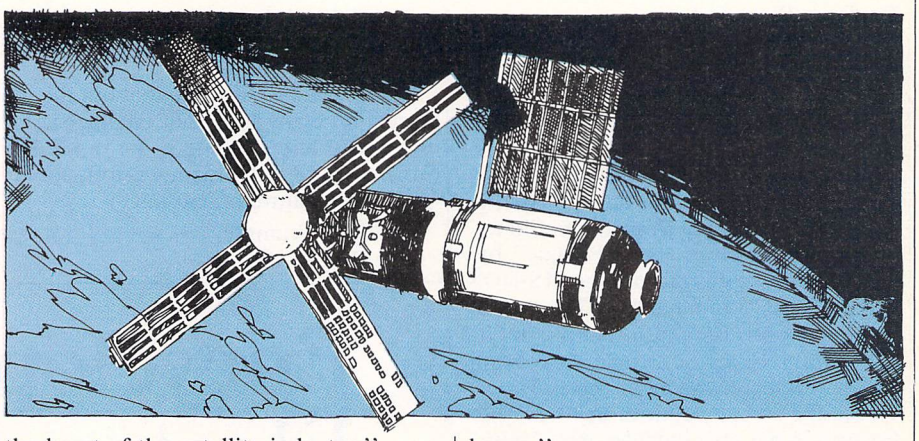
The FCC noted that last October, the satellite transmissions of both WOR-TV, a New Jersey-based "superstation," and The Movie Channel, a pay movie service, were disrupted. The FCC currently is attempting to determine whether these instances of jamming were caused deliberately or were the result of unintentional interference. In any event, notes FCC common-carrier official Charles Magin, the technology and potential for deliberate jamming exists.

"Currently, we receive about 40 or 50 complaints a month relating to interference of uplinks. All of the cases we've investigated so far have been unintentional," notes Magin.

What makes the FCC and satellite industry officials particularly uneasy is the fact that the Movie Channel disruption occurred at a time when its parent company, Showtime, was conducting scrambling tests. "Some home satellite trade publications are encouraging their readers to convert their home dishes into satellite jammers as a way of protesting the scrambling of premium entertainment services," Magin says.

The operation of an unlicensed satellite uplink station is a violation of federal law, punishable by a $10,000 fine and a jail sentence. Home and business receive-only dishes do not have to be licensed and cannot jam satellite transmissions unless illegally modified. But a satellite industry source told *Online Today* that an ordinary home satellite installation can be modified into a jamming system for about $500, "using components found at any Radio Shack store."

Ronald Anderson, a New York telecommunications consultant, says he's scared. "There is no way to protect against this," he claims. "You can encrypt your signal to keep it away from prying eyes, but there is no way you can keep someone from blocking out your signal entirely. It is a dagger pointed at the heart of the satellite industry."



An executive with a major computer company that uses satellites to transmit stock quotes says his firm is concerned but not alarmed. "We're aware of the possibility of jamming and have taken steps to counter it. However, we don't see it as a major threat, certainly not something that could bring us to our knees."

The FCC's Magin thinks that any instance of deliberate jamming would be short-lived. "We have a network of monitoring stations nationwide. We can find a jammer in very short order," he says.

— John Edwards

Assorted Bits

Key Tronic Corp. of Spokane, Wash., recently announced that it has struck a deal with Minebea Co. Ltd. of Japan. Under the arrangement, Minebea will buy about 30 percent of Key Tronic's outstanding stock. Also under the agreement, Minebea will build keyboards and other input devices for Key Tronic.

CompuServe and MCI Communications have announced the interconnection of their services — the first such domestic link between competing electronic mail systems. The link enables more than a half-million subscribers of MCI and CompuServe to communicate directly, making it the world's largest electronic mail network.

The Gateway videotex service is history. After four years of research and 15 months of test marketing, operators of the California system called it quits last February. According to the Associated Press, Gateway attracted only about 3,000 subscribers in Los Angeles and Orange counties. The shutdown also apparently will result in the layoff of most of Gateway's 120 employees and the discontinuation of the in-home banking project provided to Gateway by Security Pacific National Bank.

The International Trade Commission has unanimously rejected Tandon Corp.'s charge that Mitsubishi Electric Corp. infringed on its floppy disk drive patent. The ITC finding was the same as that of an administrative law judge who investigated the allegation last year.

Tallgrass Technologies Corp., the veteran hard-disk maker, has made its initial foray into the software market. The company's first product is BackTrack7/8, a software-based automatic hard-disk backup program. The $179 Backtrack operates in a background mode to back up files from a hard disk to tape, to another hard disk or to a floppy disk.

IBM has introduced 35 new PCjr program packages aimed at the educational market. The new programs, developed by Wicat Systems Inc., are priced at $60 to $195. The software teaches students in kindergarten through 12th grade mathematics, language arts, reading, biology and physics.

IBM recently announced it has developed a new computer chip incorporating most of the essential functions of its mainframe computers. *The New York Times* reported that the new device, a 32-bit microprocessor IBM calls a "mainframe-on-a-chip," was discussed in a paper presented at the International Solid State Circuits Conference in Anaheim, Calif. *The Times* noted that with the new chip IBM could develop a complete line of compatible computers, from micros to mainframes.

Congress Analyzes Work-At-Home

Telecommuting — working from home with an electronic link to an employer's office via computer and modem — has come to the attention of Congress, which is trying to decide if this futuristic idea needs some good, old-fashioned laws to govern it.

Hearings on home-based clerical work were held recently by the Employment and Housing Subcommittee of the House Government Operations Committee.

Congress examined a number of issues that have the potential for exploitation and abuse. First, by hiring telecommuters as independent contractors rather than as employees, employers can reduce their costs, since independent contractors receive no benefits. However, Gil Gordon of Gil Gordon Associates and others contend that telecommuters who work exclusively for one client for 40 hours a week or more are not independent contractors. "Many employers are choosing independent contractor status for the wrong reasons," Gordon said, and warned that this will have negative effects on the future of telecommuting.

Also under examination was the dilemma of full-time vs. part-time work. This issue encompasses such benefits as minimum wage and hour protection, health leave and Social Security payments, equal opportunity, training and promotion.

Another concern is the effect telecommuting has on family life. Many homeworkers, especially women, choose telecommuting in order to stay home with small children. Dr. Kathleen Christensen, director of the Project on Women and Home-based Work, told Congress that most telecommuting mothers must arrange for child care or work when the children are asleep or being cared for by another family member. "Women often work split shifts or put in a full day's work after the children go to bed," she said, noting this can have disastrous effects on family life.

"The solutions to the problems faced by clerical workers are improved compensation and working conditions," said Jackie Ruff of the Service Employees International Union. "Based on the evidence and experience of clerical homework programs to date, we call for an early ban on clerical homework."

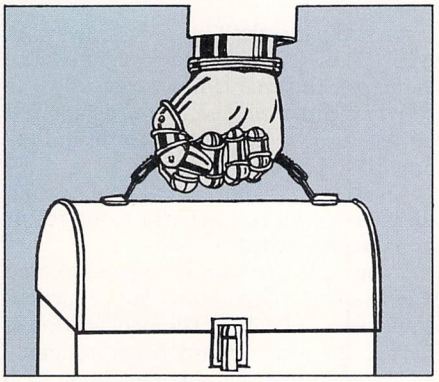
The committee, chaired by Rep. Barney Frank, D-Mass., agreed that a ban is not a practical solution.

"There are serious problems with clerical work, including tasks that are not challenging. This holds true whether the work is performed in the office, at home or even on the moon and is not a function of homework," explained Gordon, who added that homework is a "convenient target."

"There are some real benefits and some real problems to working from home. If employers are not careful, they will kill the goose that is about to lay a golden egg," said Gordon.

The congressional subcommittee concluded that sufficient regulations now are in effect through the Internal Revenue Service and various state agencies, so that no federal legislation is needed at this time.

— Cathryn Conroy



Robots Make Robots

It had to happen sometime: At GMF Robotics in Detroit, Mich., robots are making robots.

This innovation is setting an example for the use of robotic technology for low-volume production. Robots — and their associated costs — traditionally have been reserved for high-volume production.

"The benefits of robotic technology have not yet been fully realized in low- to medium-volume production systems that manufacture wide varieties of parts," says James A. Pelusi, GMF director of electronics and advanced manufacturing systems. "This has been due to the inability to integrate newly emerging technologies, as well as the lack of truly flexible production support systems, such as flexible fixture, tool and real-time manufacturing information systems."

The first robot that GMF's robots will manufacture is a "painting robot" that will be used in automotive paint shops at General Motors and American Motors.

GMF, which gets its "GM" from General Motors and its "F" from the Japanese robotics firm Fanuc Ltd., develops robots for the automotive and electronics industries. Until recently, the company farmed out its actual manufacturing work to small shops. Now, using its own robotic technology, it will build robots in its own plant, and hopes this will serve as a model to other companies requiring low-volume production.

Robotics will have a major effect on many industries, Pelusi predicts. One of the immediate advantages GMF anticipates is a cost savings. "The major cost of manufacturing is equipment utilization. During the production process, a typical part is being worked on only 5 percent of the time. Robots change all that. They streamline production and, consequently, lower costs," he notes.

Robots making robots is not without its drawbacks, however. Pelusi says the major barrier is the complexity surrounding the process. "Every time the complexity is increased, the reliability of the system decreases. Right now, we're working on simplifying the process as much as we can."

BAWD℠

(Brokerage Automated Withdrawal/Deposit)

If your stockbroker hasn't got it, call Max Ule, the computerized discount stockbroker you can talk to!

BAWD provides a direct link between your bank and brokerage accounts to eliminate float.

For Free Brochure
On CompuServe, **GO TKR**
In the Electronic Mall, **GO MU**

Or call Toll-Free
(800) 223-6642
In New York call
(212) 687-0705

Modem 5:00 PM-9:00 AM
24 Hours Weekends
(212) 986-1660

MaxUle& Company Inc.
202 East 39th Street, N.Y., 10016

GO EBB or circle 42 on the Reader Service Form.

CSU'S IBM PCs

Cleveland State University has created one of the nation's most advanced, innovative computer systems. Developed jointly by the university and IBM Corp., the system is a sophisticated network of micro-, mini- and mainframe computers.

Three computer labs, containing a total of 100 IBM PCs and nine dot-matrix printers, are so advanced that they have equipment that wasn't on the market when the labs were planned. The "PC Interconnect" ties the PCs to IBM Series/1 minicomputers, housing all the programs used by students. The microcomputers are linked to networks and are tied into the university's mainframe computer.

"A lot of universities have PC labs, but we're the first one to pull them together with networks and mainframes," said John E. Blank, coordinator for computing and an associate professor of anthropology.

In addition to mastering WordStar, DisplayWrite, dBase III, SuperCalc III and the MS-DOS operating system, CSU students also have access to the CompuServe Information Service and Dialog. CompuServe is used primarily by graduate students, who, when they write their theses and dissertations, communicate via electronic mail with their committees of advisors. At least one member of each committee must be an expert outside of the university; CompuServe makes communication with busy executives simple and easy.

Blank says the CSU approach to computers is not to teach the students programming but rather to show them how computers can be used in various fields. Students learn marketable computer skills that can be applied directly to jobs upon graduation.

— Cathryn Conroy

Doing What They Do Best

If nothing else, software companies excelled at one activity in 1985 — merging with other computer-related companies.

According to the ADAPSO/Broadview index, a software industry benchmark, more than 200 software firms merged or were acquired during 1985, a 42 percent rise from the previous year.

An ADAPSO spokesperson notes that the unusual merger activity is the result of an overcrowded market.

"The software market in general, and the personal computer market in particular, is very crowded. The competition is fierce," he said. "Many firms in financial trouble find that an acquisition by a friendly suitor is the best solution to their problems."

Early Warning System

A new computer under evaluation by the Federal Aviation Administration will enable air traffic controllers to spot potential mid-air collisions hours before they might happen.

The $3.5 million IBM 3083, which is water-cooled, works six to 10 times faster than previous air traffic control systems, processing data at speeds of 6.5 million to 9 million instructions per second. The computer currently is being tested in Seattle and Houston. Eventually, all 20 U.S. air traffic control centers will be equipped with the units.

According to an IBM spokesperson, the new computer will alert controllers several hours beforehand that a conflict exists between two aircraft flying through a controller's sector. It also will provide the operator with several rerouting options. Present-day systems alert controllers approximately three minutes before an impending collision and provide no online alternatives.

The new system is scheduled to "serve the nation's needs for the next 10 years," says the spokesperson. By 1995, IBM and the FAA expect "to remove the human factor" from air traffic control systems by having on-ground computers communicate directly with aircraft-based counterparts. "It will virtually eliminate the need for voice radio communication between the aircraft and ground," he claims.

Farewell COBOL

Is COBOL dead?

Not so very long ago, COBOL was the king of business computer languages. Its name said it all — COmmon Business-Oriented Language. And common it was, finding a place in tens of thousands of computer-equipped business offices around the world.

But, after a three-decade run at the top, COBOL is on the ropes. Users, dissatisfied with the language's clumsy syntax and memory-wasteful ways, are switching to newer, easier-to-use business languages.

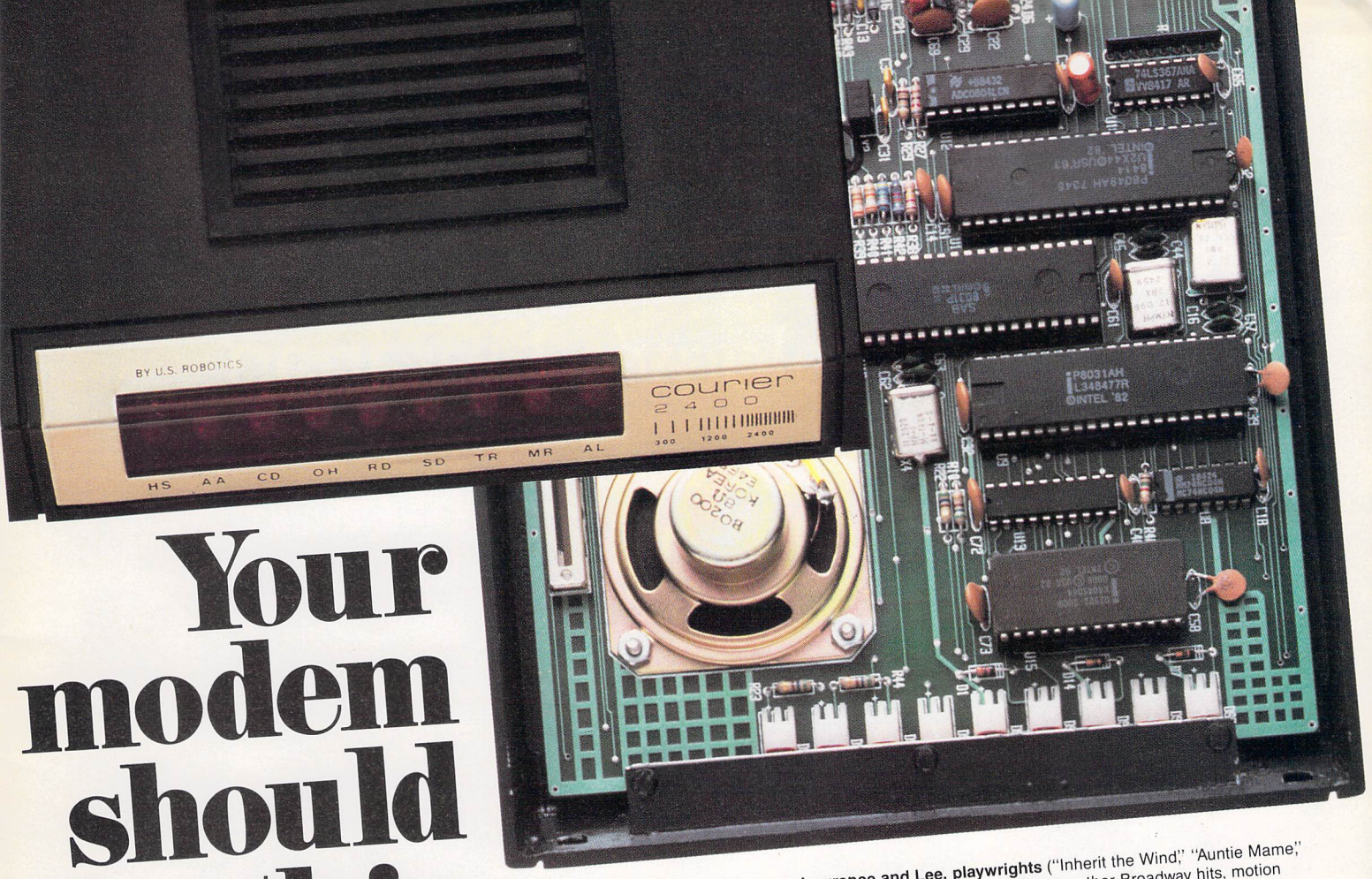
"A couple of decades ago, COBOL was intended to be the programming language of the average business user," says Steve Hamilton, president of Acadia Associates, a New York-based company that develops business software. "Everybody thought that we'd be using mainframes and minis forever. As things turned out, COBOL was too complicated for most people to handle and its supposed advantages — like self-documentation — just made the language inefficient and difficult to use, particularly on a microcomputer. Better things have come along."

Hamilton thinks the future of business programming — especially in the micro field — lies in the procedural relational database languages offered by such products as dBase III and R:base 5000. "These languages aren't necessarily easier to use, but they have the advantage of being very efficient and offering the ability to dovetail nicely with personal computer-stored data."

Sally Reims, president of CompuPlace, a Long Island, N.Y.-based computer industry job placement firm, says there are still opportunities available for COBOL programmers, but that demand has slackened in recent years. "It is not like the old days when a knowledge of COBOL alone could guarantee you a job," she says. "Today, it helps to know at least one other language plus things like JCL, VSAM and CICS. If I were advising prospective computer science students, I would recommend concentrating on the newer languages like RPG III. COBOL is fine at the moment, but I don't think it has much of a future."

Jim Porzack, vice president of Bytel Corp., a Berkeley, Calif.-based software developer, believes that code generators have played a major role in the success of procedural languages over COBOL. "Generators make programming easier. They take the dirty work out of making programs." Bytel publishes both COBOL and dBase III code generators, but Porzack sees the brightest future for generators based on procedural languages. "The market looks very good," he notes.

Hamilton agrees. "The micro and time have combined to kill COBOL," he says. "Better things have come along, and you'll continue to see COBOL's share of the market slip away. It was nice while it lasted, but the dance is over."



Your modem should be this good

Lawrence and Lee, playwrights ("Inherit the Wind," "Auntie Mame," "First Monday in October," and many other Broadway hits, motion pictures and teleplays) **and educators** (professors of Advanced Playwriting at UCLA and USC).

"Our Courier 2400 modems give us instant access to each other's minds across town or across the country. Collaborating on play scripts, exchanging and polishing our words at such dynamic speed is a powerful aid to the creative process. There's never an error, sending or receiving data. And they're as easy as they're fast. As its name implies, the Courier 2400 modem is a swift and dependable messenger. Bravo, Courier!"

The most dependable 2400-bps modem on the market... USRobotics' Courier 2400

Your personal computer or terminal becomes a data communications powerhouse with USRobotics' Courier 2400 modem.

Whatever your application—file transfer, electronic mail, mainframe access, electronic bulletin boards, public databases—Courier 2400 gets it done. Error-free, simply and FAST—up to 240 characters a second.

If you don't think you need that kind of speed, think again. Compared with a 1200-bps modem, the Courier 2400 can slash your datacom phone bills while it boosts your productivity.

Most public databases and bulletin board systems now offer 2400-bps service. In fact, more than a thousand bulletin board operators have chosen our Courier 2400—a demanding application that has proven the Courier's reliability and efficiency.

GO EBB or circle 4 on the Reader Service Form.

USRobotics

The Intelligent Choice in Data Communications

8100 McCormick Blvd. Skokie, Illinois 60076
phone toll free: **1(800)DIAL USR**

Why Courier 2400? In a word—quality. Less than one percent of all Courier 2400s have come back to us for warranty service. We challenge the industry to match this record. The auto-dial, auto-answer Courier includes all the features you'd expect in a first-class modem, and then some—like "help screens" and a printed operations summary on the back panel. You can find a modem for more money, but you can't find more modem for your money than Courier 2400.

To learn more, send for our FREE booklet, **"24 Questions and Answers on 2400-BPS Modems."**

America's business communicates on USRobotics Modems

Please send my FREE copy of **"24 Questions and Answers on 2400-BPS Modems."**

NAME _____

ADDRESS _____

CITY _____ STATE ____ ZIP ____

COMPANY _____

TITLE _____

PERSONAL USE ☐ BUSINESS USE ☐

Gateways

Technology's Librarian

By Charles Bowen

GO IQUEST

We use computers for many things, but perhaps the best enterprise for these machines is to help us sort through the ideas and writings of our fellow human beings.

Standing at the gateway of a major library is an awesome experience — in both the traditional and the newer connotations of that word. Rows upon rows of books fill us with wonder at the length and breadth of our travels in just a half dozen centuries of printing. We also are filled with apprehension: where do we dig into this rich banquet? Where do we begin our search?

In the old days, some of us cheated — we asked the librarian. Just about anyone who grew up in love with the solemn, silent halls has fond memories of at least one librarian who always could point in the right direction, whether the subject was the building of bridges or the bits and pieces of atoms.

Perhaps, that is why the latest innovation in online communications — a technology generically called "gateways" — seems already familiar to us: there is a bit of the old-fashioned librarian in it.

Earlier this year, CompuServe introduced a service that exemplifies this new thinking — IQuest, a joint gateway project with Telebase Systems Inc. of Narberth, Pa. This article looks at how to use this new feature.

Electronic portals

Basically, a gateway is the linking of one entire computer system with another. Users of the host system, such as CompuServe, can go through this electronic portal to use other systems, whether the destination computers reside in a building next door or in a city on the other side of the world.

This technology is important on at least three different levels.

First, from a purely technical point of view, gateways demonstrate how smoothly these transcontinental computer connections can be made.

For example, CompuServe has offered smaller gateways for years, and you may have used them without knowing what they were. When you log on through your local access number and visit features such as TWA's Travelshopper, American Express Advance or the Official Airline Guide Electronic Edition, your modem call actually is forwarded from CompuServe's Columbus, Ohio, computers to systems in other states.

That you experience no jet lag — in fact, you need not even be aware that your computer is making a giant leap through time and space — is a sweet victory for the folks in the programming departments.

From another perspective, gateways are the latest building blocks in what quickly is becoming an international data network.

For instance, IQuest, designed in cooperation with acclaimed database expert Richard Kollin, president of Telebase Systems, provides access to more than 700 databases resident on online systems such as Dialog, BRS, SDC/Orbit, NewsNet and others.

The databases, like sections of a library, cover a wide range of topics, from accounting, agriculture, archaeology and art to economics, education and energy to taxes, textiles and trademarks. In other words, in terms of what is accessible online, the data five-and-dime just became a supermall with the flip of a switch.

Finally, gateways are a moral victory for everyone who thinks computers should treat us civilly — as human beings, not as some sort of slow-moving add-on devices.

Simplifying the 'data nation'

Up until now, the problem with using any of the approximately 2,000 individual databases across the country was that each one worked differently. The commands you used for searching out full-text newspaper stories in one database wouldn't work when you were searching for abstracts from scientific journals in another database. It was as if the entire data nation were subdivided into states, each speaking its own dialect.

The arrival of gateways offered a chance for some humanistic programming. Like that old librarian, a gateway such as IQuest not only simplifies the searches; it even acts as a guide to help us determine which of the hundreds of online resources will help answer our questions.

Let's see how that works.

We reach the new gateway by entering GO IQUEST at any prompt. We then see this introductory menu:

```
Welcome to IQuest
(c) 1986 Pat. Pend.
Telebase Systems Inc.
PRESS TO SELECT

1 IQuest-I We pick the
  database
2 IQuest-II You pick
  the database
H Help
```

Right away we find there really are two versions of IQuest:

• IQuest-I, designed for inexperienced users, is menu-driven and selects an appropriate database for you. It does that by first prompting you to make selections from a series of categories and then to enter your question in the form of "keywords." After that, IQuest-I takes you through the gateway to the database it has chosen for you and automatically translates your query into the command language that particular database understands.

• IQuest-II is set up for more experienced searchers and offers a larger selection of databases. It asks you simply (1) to name the database you wish to search, and (2) to type in the keywords that make up your query. IQuest-II then takes over making the call to the remote service and, again, translating your question into the database's own language.

IQuest-I for the novice

Let's suppose that you're a new arrival through the gateway, so you choose IQuest-I to assist in answering your question. At the time this article was written, the U.S. air strike on Libya had just occurred and it made sense to use the system to see what we could find out about the situation and about Libya itself.

Choosing option 1 produces this menu:

```
PRESS TO SELECT

1 Subject
2 Person
3 Place
4 Organization
H Help
Total charges thus far
: $0.00
->
```

Note that IQuest-I is requesting that we narrow the search to one of four broad areas of interest — a subject, a person, a place or an organization.

Note, too, that the service keeps a running tab of our charges. Generally, IQuest bills you for only the searching and the information actually retrieved from one of the databases. Since we have not yet gone through the gateway to a database, our charges are still "$0.00."

About costs:

• Searching and retrieving information from a database carries a $7 charge. If a

search turns up no files that meet your search specifications, the charge is $1.
• In addition, a small number of databases carry an additional $4 to $8 in search surcharges. These databases are identified online to alert users in advance, and there is always an opportunity to back out of a search before incurring the extra charge.
• Standard communications "connect time" charges also are in effect on IQuest.
• Any additional online purchases, such as abstracts of references or the full text of articles, are charged on a per-item basis. More about that later.

Let's assume we first want to find information about Libya itself. We choose option 3 ("Place") from the current menu. That leads to:

```
PRESS TO SELECT

1 General information
2 Descriptive & travel
  information
H Help
Total charges thus far
: $0.00
->
```

We're looking for general information — option 1 — and the next menu gives these options:

```
PRESS TO SELECT

1 Bibliography
  (references only)
2 Full-text article
H Help

Total charges thus far
: $0.00

->
```

This brings us to an important point about the kind of information available in the databases. It comes in two forms:
• **Bibliographic**, that is, basic information about published material, such as the name of the publication, date, author and title of the article. Many bibliographic databases also provide abstracts (brief summaries) of the cited articles for an extra charge.
• **Full-text**, the complete text of the articles you've located.

Most of the databases accessible through IQuest contain only bibliographic references or only full-text articles. But when there is a choice between the two, as there is in our Libya search, IQuest-I will ask which you want.

After you've chosen options on this and any subsequent menus, IQuest is ready to find out your specific question with a prompt that says:

```
  Enter your specific
topic.
  (type H for important
examples)
  or B to back up)
```

At this point, IQuest is looking for the keyword(s) that will describe what you're looking for. It usually is a good idea to keep it simple. Here, for instance, just typing in "Libya" (without the quotation marks) would do the trick. Or you can make the search more specific. This article will conclude with more information about searches.

Also notice the prompt indicates there are other options here. You could enter:
• H for Help. This would provide examples of search strategies. In addition, some databases have their own syntax for searches, and that information also is provided in the Help file.

What's Available Through IQuest

More than 700 databases from a dozen vendors are available through the IQuest gateway option.
• Dialog Information Services Inc. of Palo Alto, Calif., provided by Lockheed Corp., offers more than 200 databases and originally was conceived as a tool for NASA researchers. The databases deal with a wide range of topics from law and government to medicine and science, engineering and technology, patents and agriculture.
• BRS (Bibliographic Retrieval Service) of Latham, N.Y., has more than 80 databases. It was designed in the mid-1970s as a dial-up service for research librarians. Since then, it has expanded to cover science and medicine, business and finance, references, education and the humanities.
• SDC/Orbit of Santa Monica, Calif., a subsidiary of Burroughs Corp., is considered the oldest of the modern database services. Online since 1965, SDC/Orbit has some 80 databases, including some that cannot be found anywhere else. For instance, SDC is the provider of Accountant of the American Institute of CPAs; Monitor, an index of the *Christian Science Monitor* newspaper; and Sport, covering sports literature.
• NewsNet of Bryn Mawr, Pa., brings together more than 300 newsletters from 34 industry groups, including computing, telecommunications and electronics as well as medicine, business, education, law, social sciences and others. The publications are daily, weekly, monthly and quarterly.
• VU/Text of Philadelphia, Pa., a Knight-Ridder service, offers the full texts of a number of major newspapers, including *The Washington Post*, *The Boston Globe* and *The Miami Herald*.
• DataTimes of Oklahoma City, Okla., is another newspaper service with the full texts of additional papers.
• Questel of Washington, D.C., a subsidiary of the French Telesystems, contains more than 40 databases, including its best-known DARC chemical files.
• DataSolve of London, a product of the British Broadcasting Corp., offers summaries of world radio broadcasts from 120 countries and foreign news agencies, as well as BBC news.

In addition, Telebase Systems Inc., provides IQuest in conjunction with CompuServe, recently added several more vendors, including Datastar of Switzerland, G. Cam Serveur of Paris, QL Systems of Kingston, Ontario, Canada, and Timeplace of Waltham, Mass.

— CB

• B to back up, that is, return to the previous menu.

H and B are two of IQuest's basic commands, and can be used at virtually any prompt in the feature. Two other commands are T (for "Top"), which returns you to the main menu, and EXIT to log off IQuest and return to the main CompuServe system.

After verifying the keyword or words you've entered, IQuest-I notifies you of the database it has selected for the job (in the Libya example, it chose one called the Magazine Index, provided by Information Access Co. of Belmont, Calif.) and makes its way through the gateway. This could take a few minutes because IQuest has quite a lot to do. It will:

• Access a communications network and dial into the chosen database vendor (in this case, Dialog in Palo Alto, Calif.).
• Submit a password for admission (you needn't remember a password. Since IQuest is your representative, the password is sent from the gateway to Dialog and it is not displayed to the user).
• Navigate to the database it has selected.
• And finally, translate your query into a language that particular database understands.

Once the search is completed, IQuest reports a number of "hits" — the number of references it has found that meet our specifications. In searching for references to Libya, Magazine Index came up with 538 references. It is then prepared to display the most recent references in that catch.

If your destination is a bibliographic database, your $7 charge provides a list of the 10 most recent references. Each is displayed with a heading number, the title of the article, the name of the author and the publication, the publication date, volume number and usually even the page number. For additional charges, you usually can see abstracts of selected articles ($2 each), view the next 10 headlines in the catch ($7) or order reprints of the selected articles to be mailed to you directly ($12 by U.S. mail, $28 via overnight courier).

On the other hand, if the database is a full-text service, your initial $7 provides the latest 15 references. And, for no extra charge, you may enter a heading number to view the complete text of one of the articles. Usually you also can order mailed reprints or display the next 15 references from the search for extra charges.

Our Libya search came up with references to background articles that had been published in the *National Review*, *Nation*, *U.S. News and World Report*, *Time*, *Fortune*, *New Republic*, and even *Sports Illustrated* ("Athlete's comments about Libya"). The titles of the articles indicated the content ranged from news reporting to political and social commentary.

A typical menu following a search looks like this:

```
PRESS TO
1 Review Headings again
2 See Abstracts ($2 each)
3 Order reprints (need
  headings)
4 See next 10 headings ($7)
5 Start a new search
  (or SOS)
6 Leave System
Total charges thus far:
  $7.00
->
```

As you can see, the bottom line informs us that the charges so far are $7. Should we order additional services — the next collection of headings, another search or reprints — the amount displayed in the bottom line would go up.

Option 5 in our example introduces a new concept — the SOS command.

One of the appealing aspects of IQuest is that you're never far away from a helping hand. At virtually any -> prompt in IQuest, you can enter the command SOS to receive real-time assistance from a researcher at Telebase. A researcher is available online around the clock for advice on all facets of the IQuest program, from defining keywords to selecting databases.

Expanding search strategies

Once you become familiar with IQuest-I, you might want to step up to the advanced service, IQuest-II. It is faster — since it provides fewer menus to be studied — and it offers access to a wider variety of databases.

The difference between IQuest-I and IQuest-II is that in the latter, you select the database you wish to search, rather than turning that responsibility over to the gateway. Once you've named the database, you'll be prompted for your keyword or words. Then the system will handle the journey through the gateway and the log-on procedures and communicate with the database on your behalf.

So with either IQuest-I or IQuest-II, the key to successful searching is in defining the keywords.

The best place to start your search strategies is offline. Before you log on, you can save money by giving some thought to what you'll want to specify at the keyword prompt. To help, here are some general guidelines for entering keywords in IQuest-I and IQuest-II:

• Omit command words, like OF, THE, FOR and AT. (For instance, instead of "the Department of the Interior," make it "Department Interior".)
• Think of words and phrases that are unique to your subject. "Convertible," for instance, is a more specific term than simply "Automobile."
• Don't worry about using capitalization at the prompt. IQuest views upper- and lowercase letters the same.
• The slash (/) character is a "wildcard." It can be used at the end of a keyword to retrieve references to text that includes words beginning with specified letters (such as COMPUT/ to retrieve COMPUTER, COMPUTERS, COMPUTING or COMPUTATIONS). The slash also can be used in the middle of words — PRACTI/E would retrieve both "practice" and the British spelling, "practise."

In addition, IQuest recognizes three major connectors:

• AND to narrow your search. For example, use APPLE AND IBM to fetch only those files that contain *both* keywords.
• OR to expand your search. By specifying APPLE OR IBM, you would retrieve files containing *either* the word "Apple" or the letters "IBM."
• NOT to exclude a specified topic from your search. If you were looking for references to the country of Libya that did not deal with the current political situation, you might enter LIBYA NOT TERRORIS/. That would collect files that mentioned Libya but did *not* also mention words that begin with "terroris" such as "terrorism" and "terrorist."

Finally, you can combine (or "nest") searches by using parentheses () around groups of words that you have connected with AND, OR or NOT. For instance, (LIBYA OR SYRIA OR IRAN) AND TERRORISM would retrieve files that include at least one of the three countries AND the word "terrorism."

Charles Bowen is a contributing editor of Online Today. *His CompuServe User ID number is 70007,411.*

Other Gateways

IQuest may be the largest, but it is certainly not the first gateway to which CompuServe subscribers have had access. Even in the earliest days, subscribers could use a modem to venture from the CompuServe computers in Columbus, to systems in other parts of the country.

From the first years of the system, CompuServe has provided access to gateways like the famed Official Airline Guide Electronic Edition for travel information and Comp-u-store for online shopping.

Now OAG and Comp-u-store, still major gateways, have been joined by a host of new ones. Here's a rundown of some of CompuServe's gateways:

• The Official Airline Guide Electronic Edition (GO OAG) provides unbiased direct and connecting flight information for more than 750 airlines worldwide, including fares and schedules. A relatively new feature even allows you to make reservations through the system.

In addition, OAG EE displays listings for hotels and motels in selected locations, including rates for rooms and quality ratings.

The service uses a question-answer dialog to gather information about your departure city, destination and preferred dates and times, then displays the information chronologically by departure time. Fare displays are shown from lowest to highest.

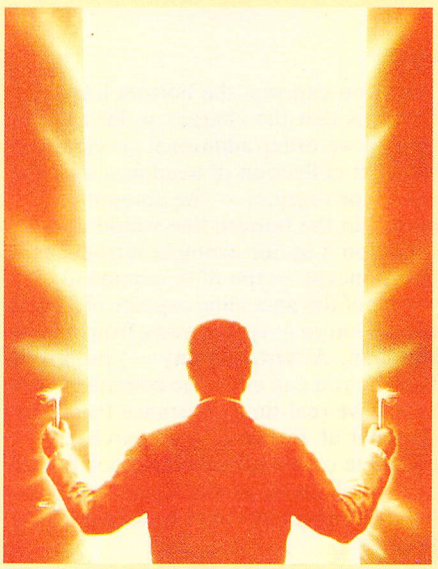
OAG EE also employs its own set of commands. A summary of these commands is offered as an option on the main OAG menu. Or, once inside the feature, you can enter /I at any OAG prompt for complete instructions.

• TWA's Travelshopper (GO TWA) is a newer travel assistant online. It allows you to browse virtually any airline's flight availability and fares, starting with the "best" flights for the times and dates you specify.

The system will prompt you for information on your destination cities and dates and times, then allows you to compare your options. You also can check the travel restrictions applicable to individual flights.

If you enroll as a member of Travelshopper, you can make reservations and changes to the reservations at any time of the day or night. In addition, the gateway offers TWA's Frequent Flight Bonus program making you eligible for free travel as you accumulate mileage credits. The system also makes available a list of TWA ticketing agencies.

Travelshopper also recently introduced an "expert mode" for experienced users to speed through browsing of flight and fare information. Expert mode, discussed in detail in an option listed on the main Travelshopper menu, allows you to link commands with a semicolon. Travelshopper commands also are summarized on the main menu.



• American Express ADVANCE (GO AXP) gives cardholders account information and direct communications with the company.

Also available in the gateway is the IDS Financial Services Inc. designed to help users solve their own financial problems. The service is made possible through a network of 4,500 representatives supported by a staff of lawyers, tax advisors and accountants. The options provide financial case studies and even an online quiz.

In addition, online features include American Express travel services, including vacation packages, pocket travel guides and pocket directories of air schedules, as well as access to shopping services. American Express brochures on some features can be ordered online.

• PaperChase (GO PAPERCHASE) is a medical reference database from Beth Israel Hospital of Boston, putting at your disposal Medline, the database of the National Library of Medicine.

The database contains more than 2.7 million references from 3,400 journals indexed since Jan. 1, 1975, and the system is steadily growing — each month, additional references are indexed and abstracted.

When you're using the database, the system will prompt you with questions and provide a "default answer." At the prompt, you can either accept the default by simply pressing RETURN, or enter your own answer to the question.

PaperChase has two major sections — LOOK FOR, with which you can create lists of references that meet your specifications, and OPTIONS, which uses your lists to find references from the database.

Details on how to use the service can be found on the main PaperChase menu.

• Comp-u-store (GO CUS), considered by most to be the first online shopping service, gives members access to more than 250,000 quality, name-brand products at discounts of up to 50 percent.

The service provides a number of features, including classified ads, a consumer hotline, warehouse outlet and software reviews. Specialized "boutiques" are available from national retailers and some regional shops.

Comp-u-store, provided by Comp-U-Card of Stamford, Conn., also holds monthly online auctions and awards bonus "Comp-U-Bucks" credits for rebates on purchases.

Other features include a discount travel service, health-and-beauty aids shop and Consumer Services including credit card protection, a consumer newsletter and ERA Real Estate.

CUS members may make purchases via a major credit card or personal check and arrange to have delivery anywhere in the continental United States. Members also receive a Comp-u-store users manual listing special codes used in the service.

— CB

WONDERWOMAN!

How Instant Demographics™ and I found new banking, mall and health care sites . . . over a cup of coffee.

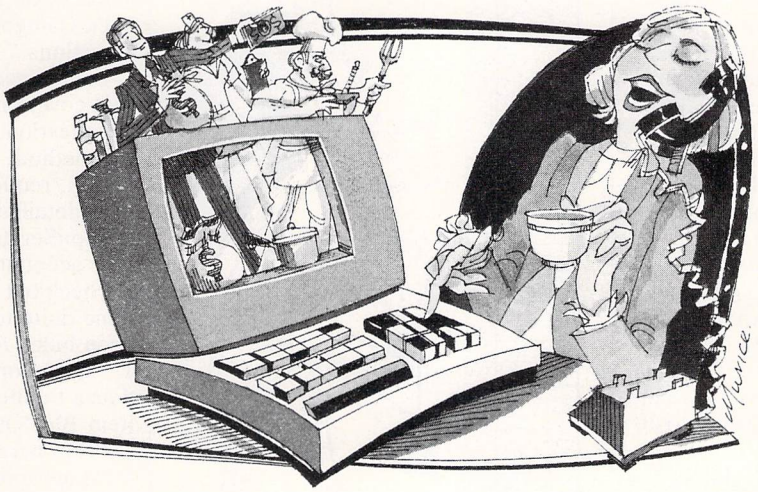
Clients think I'm a "genius consultant", but it's really CACI's remarkable information system that makes me so smart and so fast.

My banking client now knows where to open two new branches, where to locate 26 ATMs, and where to push IRAs. My health care client knows not only what areas will need the nursing homes he's building but what areas can afford them. My shopping mall client can compare sales potential figures for 9 types of retail stores at 3 potential sites.

I got them all of this information over 3 cups of coffee one day last week. That's when "Wonderwoman" became my name.

Data for any market size or shape.

I can zero in on specific intersections, ZIP codes, census tracts, circles of any radius, coffee stains on the map—



"You were right! Your market's out there, and we've found it."

markets of any size or shape. Or counties, ADI's, states, you name it. I can analyze one site or compare a thousand.

At the tips of my fingers—thousands of custom reports.

I can customize any of more than 40 available reports—including 16 different retail and 3 financial sales potential reports.

Today's data *and* tomorrow's.

Thanks to CACI's National Board of Demographers—renowned information experts—my clients are assured that the projections I give them are the very best available—no matter how far away we get from the last census.

And now, with my next cup of coffee or two, I'll work a few more wonders . . . a shopping center analysis for my new real estate client, some demographic analyses for my medical client, and several new site analyses for my franchising clients.

I can help all kinds of businesses.

I can customize reports on investments, savings, loans, apparel, footwear, sporting goods, groceries, drugs, dining out, department stores, home improvements and auto aftermarket.

The world's largest up-to-date database of demographic and buying power facts and forecasts is on CompuServe!

The genius is in CACI's incomparable data and their expert Market Specialists and Demographers. Together, we can manipulate the latest, most accurate income, demographic, and sales potential data—this year's, as well as historic and projected figures.

Between sips I can search, screen, and rank-order information from more than 60 million data items.

Mine for the asking, yours, too!

Use CACI's Instant Demographics ONLINE and Custom Data Services for your ongoing market data needs. Just call 800-292-2224 and talk to an On-Line Representative who can help you become a wonder, too. In Virginia, 703-841-4798.

CACI/ Instant Demographics

Market Intelligence for Decision Makers™

New York • Washington, D.C. • Los Angeles • London • Amsterdam

SITELINE and Market Intelligence for Decision Makers are service marks of CACI, Inc.-Federal.

GO EBB or circle 5 on the Reader Service Form.

Getting Feedback

I hate vending machines with a passion. It is not that they want to steal your money. The problem is that the abuse these free-standing markets take eventually leads to minor breakdowns, and that in turn leads to lost coins and no easy refunds. The last time I watched my change disappear, I was in a shopping mall. After filling out a form, I was told I could expect my $1.35 back within three weeks.

An irrepressible dreamer, I fantasized a CompuServe connection next to the vending machine. Ah, thought I, if only I could just type "GO FEEDBACK"!

Feedback is CompuServe's online complaint, repair and information department. No walking, no searching, no tedious forms and endless waits. Typing "GO FEEDBACK" takes you directly to the source of your salvation. Best of all, the time you spend in Feedback is free; CompuServe doesn't charge you a cent. (Take note, though, that the phone company does charge you. There's nothing CompuServe can do about that 25 cent-per-hour surcharge.)

When you enter the Feedback area, your online charges stop and you are asked to enter your name. Another carriage return then takes you to "Categories." Problems, complaints and suggestions pop up in a dazzling variety, so the Feedback menu is broken down into 10 basic categories, including telephone/access, billing, VIDTEX, electronic mail, forums, personal files and business services.

When you choose the category in which you want help, be sure to pick correctly. If you have a problem on the CB Simulator, for example, don't pick forums. On the other hand, if you've a comment on the CB Interest Group Forum (CBIG), don't tell Feedback you want the CB category.

Suppose your VIDTEX telecommunications software is giving you headaches. Choosing item 3, "VIDTEX software questions," takes you to an all VIDTEX menu. Once again, don't choose a number at random! Be certain to choose the item most closely fitting your problem or question.

If, for example, you want to set up a VIDTEX automatic logon procedure, item 5, "How to do an Auto-Logon," fits your bill. Item 6, "Using Meta keys" may seem to fit, but in fact it is not specifically tailored for logon procedures.

Sometimes nothing on the menu seems quite right. Perhaps your difficulty is not covered there, or maybe you have yet to nail down precisely what's going wrong. In that case, you'd choose item 9, "Other," and leave a message. Be sure to mention all the relevant facts: your computer model, where you were on CompuServe when you experienced trouble, what happened on your screen (if anything), and what you were trying to do. The folks who monitor Feedback are not psychic. If you want help, you have to be explicit and complete in your description.

Often, though, the menu item you pick in Feedback takes care of writing a message for you. Were you to choose

item 7, "Can't find VIDTEX," you would be asked if you'd like to visit the Order pages, where you can find the software.

Other choices will mark you down to receive a helpful EasyPlex message with the answers you need. Suppose, for example, you chose item 2, "Composing a message offline," from the EasyPlex message category. The system replies, "Details will be sent to you through EasyPlex electronic mail." Wait a day — and voila! A full explanation of offline EasyPlex composition lands in your electronic mailbox.

This categorical breakdown of Feedback menus allows CompuServe's staff to deal with commonly asked questions at the greatest possible speed. Since certain items require the same answer every time, the menu saves you the time you'd spend explaining a problem the Feedback staff has already answered more times than they can count. The Feedback program then automatically sends you the reply. And, on the off-chance that you still have comments to make, Feedback asks if you have something you'd like to say.

Let's return to my problem with the vending machine, adjusting it to fit telecommunications. I've deposited, or spent, $1.35. But something went wrong, and I've lost my money. I type "GO FEEDBACK," and then my name. What next? Aha! There on the Feedback Categories page is item 2, "Billing Questions."

Item 2 leads me to another menu, one that covers nearly every imaginable billing question. Here, I can change my billing method, learn about the CheckFree option, request a hard copy of my bill with detailed breakdowns of my CompuServe sessions, or request a business account. All useful — I'll remember to check out these options later on — but none quite to the point. Since I haven't been billed for that $1.35 yet, even item 1, "Question about my charges," doesn't quite meet the case. So I choose item 10, "Other."

From here on it is simple. I leave a message about my lost $1.35 and wait for the credit to be applied to my bill. No walking and no interminable waiting. It sure beats searching all over a shopping mall.

Alex Krislov is a free-lance writer from Cleveland. His CompuServe User ID number is 70007,2130.

PSSST!

Get behind the scenes with Monitor's "Behind the Screens" section on *Online Today Electronic Edition*. Find out what's *really* going on. GO OLT from any prompt in CompuServe and select "Monitor Daily News" from the main menu.

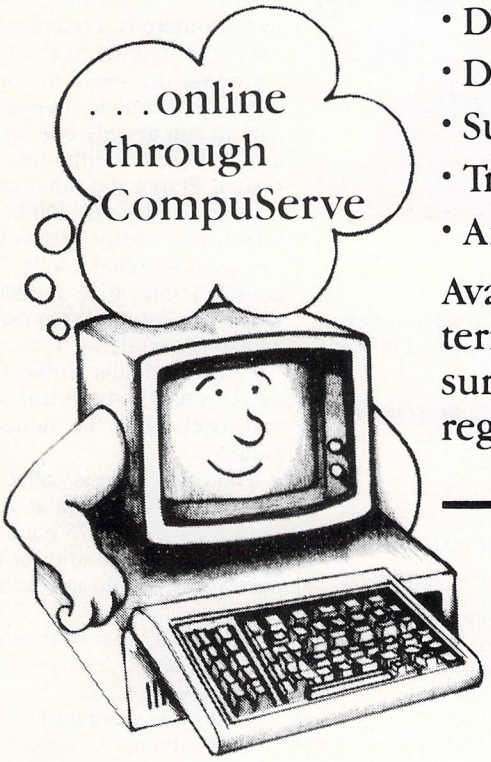
ONLINE TODAY
ELECTRONIC EDITION

PaperChase

the user-friendly computer program that gives you instant, easy access to the most up-to-date medical information available.

GO PCH...

to access MEDLINE, the National Library of Medicine's index to biomedical literature. . . 3,400 journals are indexed and abstracted. . . over 3.4 million references on



- Drugs
- Diagnosis
- Surgery
- Treatment Programs
- And More

Available around the clock. . . via your terminal or personal computer for a surcharge of only $24/hour. . . no registration fee or monthly minimum.

...a little help from a friend

PaperChase

Beth Israel Hospital
330 Brookline Avenue
Boston, MA 02215
(617) 735-2253 or 76703,2003 on EasyPlex

GO EBB or circle 6 on the Reader Service Form.

The Foreign Connection

Accessing CompuServe from Overseas

by Ben Knox

As a CompuServe subscriber living in Great Britain, one of the questions I frequently am asked online is, "How can I access CompuServe with my portable microcomputer when I'm visiting Europe on vacation or business?"

There are two ways you can access CompuServe while out of the United States. One is to make an international telephone call to your usual CompuServe node. While this method is easy to carry out, it is expensive and your connection will undoubtedly be very noisy.

The second method is to use the international computer data networks that link almost all the countries of the world. Computer data networks are just like the normal telephone network, except they can be used only by computers and are many times less expensive. In fact, many of you will have already had experience with computer data networks, because that is exactly what Tymnet and Telenet are.

Using Britain as an example, here are the procedures for linking up to CompuServe when you are outside the United States and Canada.

Logging on from Britain: *Knox*

First, you probably will need a new modem. If you have ever picked up your telephone while your modem is connected, you know that it sends and receives data in the form of beeps or tones. As with most technologies, there are differences between the tones used in the United States and those used in other countries.

The US modem tones are often called Bell 103 (for 300 baud) or Bell 212A (for 1200 baud). Most other countries conform to a different "standard" called CCITT (*Comite' Consultatif International de Telephonie et de Telegraphie*). This difference in standards simply means that US modems will not be able to link up to computer systems or networks in other countries.

You usually can purchase a basic CCITT modem for $100 to $200. I recommend that you buy an acoustic coupler instead of a direct-connect modem. You will be able to use an acoustic coupler anywhere there is a telephone, without having to look for special sockets.

Choose the speed of your modem carefully. Acoustic couplers are generally able to run at only one speed. Once again, there are differences between the United States and other countries concerning baud rates: 300 baud is straightforward — except that in CCITT terminology it is called "V.21." The complications arise at 1200 baud. In CCITT countries there are two types of 1200-baud modems. One, called "V.22," is similar to the US Bell 212A system; data is both transmitted from and received by the modem at 1200 baud.

The other type is called "V.23." V.23 modems receive data at 1200 baud, but send data at only 75 baud. Therefore, if you want to send a lot of files and messages, you do not want a V.23 modem.

Once you have your modem, you will need to gain access to a computer network in your area.

To do this, contact the telecommunications administration or main telecommunications company of the country in which you are staying. In Britain, the company is British Telecom.

Call and ask for the International Data Network department. Explain that you would like to buy a temporary user ID number on their data network so that you can access CompuServe in the United States.

Depending on the company and country, there are varying degrees of difficulty in getting your request granted. Some data companies now let you buy special three-month user ID packs especially for international travelers. Unfortunately,

International Computer Data Networks

United Kingdom:

International Packet Switch Stream
British Telecom International
IPSS Operations and Development
Room 723 Holborn Centre
120 Holborn
London EC1N 2TE England
Tel: London 936 2750
Telex: 21601 BTINT G

Registration charge: $75 (includes three months rental and $30 time and data charge)

France:

Transpac
M Girerd or M Chevalier
Direction Des Telecommunications
Des Reseaux Exterieurs
Service Commerciale
21 Rue De La Banque
75084 Paris Cedex 02 France
Tel: Paris 4762 7960 or 4762 7961
Telex: 260676

Registration charge: None

West Germany:

Datex-P
Deutsche Bundespost
Fernmeldetechnishes Zentralamt
Referat Kundenberatung fuer Dateldienste
Postfach 5000
D-6100 Darmstadt
Federal Republic of Germany
Tel: Darmstadt 834641

Registration charge: $5. Monthly rental: $7.

Japan:

Mr. Shinji Yoshida, Mr. Koichi Tanagi, or Mr. Koichi Kato
DDX P (Venus-P)
Kokusai Denshin Denwa Co. Ltd. (KDD)
2nd Marketing Division
Commercial Dept.
Marunochi Mitsui Building
2-2 Marunochi 2-Chome
Chiyoda-Yu
Tokyo 100 Japan
Tel: Tokyo 240 8449
Telex: 24700 KDDSALES

Registration charge: $2.

For information on other countries, contact your Tymnet or Telenet office.

only Britain and Singapore (shortly) have introduced this service so far; therefore a little persuasion may be required elsewhere.

Your network user ID number pack should contain details of the telephone numbers you need to call for your nearest "node" and instructions for logging on.

Pay particular attention to the actions you should take once you have dialed the number and connected your modem. On most systems you have to enter a terminal identifier to tell the network what sort of terminal you are using. Usually, you will not get any response from the node until you have typed this terminal identifier. For example, in Britain, you need to press the Return key twice, followed by "D1," and hit the Return key again.

After you have entered the identifier, you will get some indication that the node has acknowledged your presence — often a string of numbers and letters such as "LO3/231421323-123".

Next enter the user ID number supplied to you by the data company.

Finally, enter the network address of CompuServe: 3132. The address can be thought of as the telephone number of the system you want to access. Again, you must consult the data network instructions to discover whether any extra characters need to be added. For example, in Britain, you have to type in "A93132" as the address. The "A" is used so that the network knows you are typing in an address and the "9" means that the number is an overseas address. Other systems may not use the same conventions.

Once you have entered the address, the connection will be established and you will see the familiar "Host Name:" prompt. Then, you may continue to use CompuServe in the normal way.

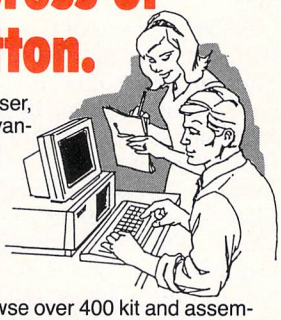
You will be charged, on average, about $6 per hour as a connect-time charge in addition to any charges you incur on CompuServe. Also, you will be charged for the amount of data that you send or receive. This works out to be roughly $6 per 64 kilobytes of data.

Now you can keep in touch with CompuServe wherever you are in the world.

Ben Knox is a free-lance writer and television reporter in Britain. He writes a regular column on communications in Practical Computing, a British computer magazine, and reports on Thames Television's computer programme, Database. His CompuServe User ID number is 76703,3025.

With the HEATHKIT ONLINE CATALOG

you can order over 400 kit and assembled computer and electronic products – with the press of a button.



As a CompuServe® user, you want the full advantages this system can offer. And what better way to make CompuServe work for you than to let it bring you the Heathkit Online Catalog. Menu-Driven, our catalog lets you browse over 400 kit and assembled products from 17 major product categories. You can even order a free hardcopy version of our catalog.

Among the many high-quality products you'll find are:

• IBM AT-compatible advanced personal computers • IBM PC-compatible compact personal computers • IBM PC-compatible expandable personal computers • Portable and desktop PCs • Laptop computers with built-in software • Microcomputer-Aided Drafting and Design programs • the HERO® 2000 Robot • Test Instruments • Home Security Systems • TV's and video recorders • Amateur Radio gear and more

All of our products are meticulously engineered and backed by excellent service and support. And as an added plus, our kits offer you the satisfaction of building a high-tech quality product yourself.

You'll also find complete hands-on training courses in areas ranging from basic electricity and programming languages to microprocessors and robotics. All courses are designed by educators knowledgeable in their respective fields.

And for added convenience, you can place your order through your computer using your Visa, MasterCard or Heath Revolving Charge – it's that easy.

To benefit from this unique opportunity, type

GO HTH

at any "!" or "OK" prompt on the system

The Heathkit Online Catalog – your *direct* line to quality high tech products

Heathkit®

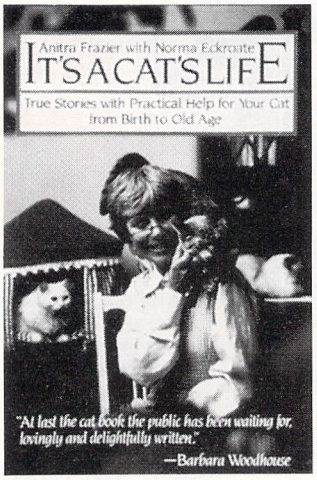
Heath Company

CompuServe is a registered trademark of CompuServe Inc. An H&R Block Company. CL-785R1

GO EBB or circle 7 on the Reader Service Form.

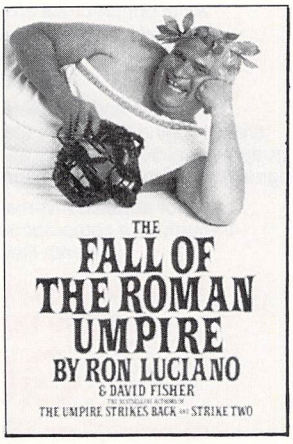
Books for All from The Mall

The Electronic Mall is your source for a wide range of reading material. The Book Department features a variety of merchants including the nation's largest bookstore chain and an innovative San Francisco publisher. CompuServe subscribers will find titles for every occasion, whether it is a spy story for a lazy summer afternoon or a guide to investing in stocks, bonds and securities. Here is a look at the different sources for books at The Mall:



• Bantam Books (GO BB). This leading New York publisher offers a cross-section of titles in an online catalog. Bestsellers such as *Iaccoca*, *Yeager* and Ron Luciano's *The Fall of The Roman Umpire* are featured as are practical, how-to titles such as *The Bantam Step-by-Step Book of Needlecraft* and *Your Ticket to Medical (or Dental) School.* Bantam also sells a selection of computer titles online including *The Apple IIc Book*, *The Commodore 64 Survival Manual* and *The Macintosh*. In addition, Bantam has a 36-page shop-at-home catalog that subscribers can request for free.

• Divine Inspiration (GO DII). This San Diego-based Christian bookstore has a full line of religious and inspirational items for sale. Available online are Bibles, Bible study guides, and Bible reference books; children's books and games; audio cassettes of music by such artists as the London Philharmonic, Amy Grant and the Imperials; books and cassettes for personal and spiritual growth; and video cassettes for the whole family. Choose from works by leading authors such as C.S. Lewis, Zig Ziglar and John Delorean.



Many items available through the store are not online, including movies from Walt Disney and other studios, and there is a special order area for inquiries about these items. Also, you can request a free full-color catalog.

• McGraw-Hill Book Company (GO MH). A leader in business, technical and trade publishing, McGraw-Hill offers books, manuals and guides for the professional. In the Computer Books Catalog, for example, titles cover the following categories: programming languages, introductory computing and data processing, advanced computing, information systems, guides, games, projects, communications and word processing, and general interest. Catalogs of specialized publications in the fields of business, law, engineering and science also are offered online. McGraw-Hill has leading trade titles, too. Bestsellers such as *Pearl Harbor* Dr. Christiaan Barnard's *Your Healthy Heart* are available through McGraw-Hill's Mall store.

• Mercury House (GO MER). San Francisco's newest publisher launched its premier list at the opening of its Electronic Mall store. Mercury House, specializing in quality fiction and nonfiction titles, brings readers a range of choices. Among the authors featured are best-selling British writer Colin Wilson, and Anitra Fraizer, author of *It's a Cat's Life.*

• Waldenbooks (GO WB). Waldenbooks, the nation's largest bookseller, offers CompuServe subscribers popular books culled from a cross-section of publishers. Among the categories offered are fiction, nonfiction, inspirational, house and home, classics, reference, business and finance, sports, cooking and humor. There also is a listing of discounted books. Two areas of specialization in Waldenbooks' Electronic Mall store are science fiction and children's. An extensive catalog of science fiction and fantasy titles includes many special autographed copies and limited editions. Waldenbooks' catalog of children's titles includes dozens of books for all ages. The selections range from top-selling modern classics like *Pat the Bunny* to all-time favorites such as *The Wizard of Oz* and *The Nutcracker.* Many classics such as *Black Beauty*, *Heidi* and *Huckleberry Finn* — all perfect for summer reading — also are available for ordering online.

APPAREL/ACCESSORIES

APC	Apparel Concepts
ATH	Athlete's Outfitters
BF	Birkenstock Footwear
CT	Computer Tee's
RF	International Fur Wholesalers
LNX	Lenox of Fairfield
MJ	Milkins Jewelers
BAG	Woodstock Leather Co.

AUTO

AMS	AMS/Oil Dealer
ATB	American Tire Buyers
BU	Buick

BOOKS

BB	Bantam Books
DII	Christian Book Store
MH	McGraw-Hill Inc.
MER	Mercury House
WB	Waldenbooks

CAREER/SELF-HELP

TDG	Teledata*Guide
WS	Wayside Systems

COMPUTING

CPG	Compu-Game
CE	Computer Express
CL	Conroy-LaPointe
HTH	The Heath Company
DSK	1-800-Floppys
MM	Marymac Industries Inc.
MO	Misco Computer Supplies
SR	Sears, Roebuck & Co.
SDA	Software Discounters of America

FINANCIAL

CN	Colonial National Bank
EL	Equitable Life
MU	Max Ule Discount Brokerage
SLG	Sun Life Group

GIFTS/GOURMET

FTH	Fifth Avenue Shopper
FFS	Florida Fruit Shippers
SDG	The Grower's Store
HH	Hobbit Hole/Wyandotte Wines
LM	Lincoln Manor Baskets
SEA	Lobster Market
NUT	Morrow's Nut House
SIM	Simon David
TG	Topgar Tobaccos
WK	Walter Knoll Florist

HOME/LEISURE

CC Cosmic Concepts
GG The Game Getters, Inc.
MAO Music Alley Online
RR Rin Robyn Pool & Patio

MERCHANDISE/ELECTRONICS

AXM American Express
EGS Electronic Gadget Store
ELM Electronics Mart
NCS Nationwide Catalog Shopper
SR Sears, Roebuck & Co.
SUN Sunland Camera
XDM Xerox Direct Marketing

ONLINE SERVICES

EF EF Hutton
GLO Globalink
NN NewsNet
OA Official Airline Guides
VL Videolog Electronics

PERIODICALS

CW CW Communications
DJ Dow Jones & Co.
ME EBSCO Magazine Entree
ECO ECOPRESS
US USA TODAY

PREMIUM MERCHANTS

BL Bloomingdale's By Mail
NM Neiman-Marcus
TIF Tiffany & Co.

RECORDS/MOVIES

CF CBS/Fox Video
EMC Express Music CDs
FF French Films on Video
MV Magic Castle Video
RC RCA Direct Marketing
RW Record World

SPORTS/HEALTH

BP Barracuda Sports Products
BS Berry Scuba Co.
HF Carolina Health & Fitness
VM VitaMenagerie

TRAVEL

AA American Airlines
AF Air France
AT Ameropa Travel
WL Worldwide Property Guide

NEW PRODUCTS

Travelshopper Adds Flifo

Travelshopper now has Flight Operation Information, a capability enabling CompuServe subscribers to check on the exact arrival and departure times of airline flights. It's possible to find out in advance if your flight will be delayed two hours, for example, or to check on flight arrival times if you're picking up someone at the airport. This capability is available for all TWA flights through Travelshopper. GO TWA

Travel in the Rockies

Rocky Mountain Connections, a new travel service, offers information on Utah, Wyoming, Colorado, Nevada, Idaho and Montana. Information about winter skiing activities is available and vacation reservations can be made through this service. Rocky Mountain Connections also includes information on state attractions, recreation areas, dining and entertainment, accommodations and ski resorts. GO ROCKIES

Soap Opera Summary Expands

The Soap Opera Summary Database, provided on CompuServe by TV Soaps Inc., now includes summaries of the five prime-time soap operas in addition to summaries of the 13 daytime dramas. "The Colbys," "Dallas," "Dynasty," "Falcon Crest" and "Knots Landing" are summarized in a new section of the database. GO SOS

Comic Book Forum Available

The Comic Book Forum features sections on comic history, news and reviews, U.S. and foreign comics, animation and more. Several comic and animated professionals, including Chris Claremont, Len Wein, Marv Wolfman, Bob Greenberger, Steven Gerber and Mark Evanier, are already involved in the forum. The Comic Book Forum is an addition to the Science Fiction/Fantasy Magazine, Online Visions. GO COMIC

Find Adventures in Travel

Adventures in Travel, a new travel offering on CompuServe, is provided by professional travel writer Lee Foster, whom subscribers know through his West Coast Travel service (GO WCT). All aspects of worldwide travel will be covered. For example, in an article about Mexico's Caribbean resort on Cozumel Island, Foster searches out the Mayan ruins, beaches and snorkeling spots. Adventures in Travel features a new travel article every two weeks. GO AIT

Microsearch Expands Database

Microsearch, a database of comprehensive information about microcomputers, has an expanded introductory section available. The section includes search tips and other helpful information such as sample keywords, micro keywords and listings of publication abstracts. It is available at normal connect time rates plus communications surcharges.

Microsearch is updated twice monthly and contains more than 20,000 abstracts of product reviews and product literature. You may search quickly and easily within Software Information, Hardware/Services/Accessories Information or the Directory of Manufacturers. The three search categories carry surcharges of $10 per hour plus communications surcharges. GO MSH

Ashton-Tate Adds Multimate

Ashton-Tate's Technical Reference Library on the CompuServe Information Service now includes Multimate support information. Multimate users can find answers to commonly asked questions, read about the printer action table of the month and go through a pre-call checklist.

The Ashton-Tate Forum will be adding a message subtopic for Multimate. Members of the Multimate Support Center will respond to support questions in this area and post the most current printer action tables in the data library.

Since its acquisition of Multimate International in December 1985, Ashton-Tate has been working on plans to integrate Multimate's product line; the forum represents Ashton-Tate's product support efforts. GO ASHTON and GO ASHFORUM

Answers from Customer Service

Q: If I notice problems with the flight schedules in the Official Airline Guide, whom should I contact?

A: When you enter the Official Airline Guide, you are going to a "foreign host," which means that the computer with the information is not at CompuServe's computer center. Problems with these systems should be reported to the information provider. You can contact the Official Airline Guide at 800/323-4000 or 800/942-3011 in Illinois. If you live in Canada, you can call 312/654-6808.

Q: If I am having trouble with my computer equipment, modem or communications software other than VIDTEX, can CompuServe help?

A: If you are having problems with your equipment or software other than VIDTEX, the best source of information is the manufacturer.

Q: I downloaded a file on CompuServe for my computer and although the downloading process was successful, the program will not run. Whom should I contact for assistance?

A: If you downloaded the file in a CompuServe forum, you can leave a message for the forum administrator describing the problem. If the file you have downloaded was not in a forum or you wanted specific information on the file, you can also contact the person who uploaded the file. The User ID number of the person who uploaded the file is included with the file name in the description of the file. You can send the author an EasyPlex message detailing the problems.

Changing Your Password

The CompuServe Information Service urges its customers to change their password(s) at least once a month.

The password should be a minimum of eight characters composed of two unrelated words separated by a symbol, for example: HOUSE*MAGNET.

To find out how to change your password, type GO PASSWORD.

Q: If I order a product in The Electronic Mall and have a problem with the product or the order, whom do I contact?

A: Questions on orders or problems concerning products ordered in The Electronic Mall should be directed to the mall merchant. Most of the merchants provide a direct Feedback area on the service where you can leave a message for their customer service department. If they do not have a Feedback area, they will also often either have a telephone number or an EasyPlex address to which you can send inquiries. If you do not receive satisfaction in talking to the merchant, you can leave a message for the Mall Manager with the name of the merchant and details of the problem.

Q: I have recently lost my Comp-u-store ID number. How can I find out what it is?

A: To find out what your Comp-u-store ID number is, you can call Comp-u-store directly at 800/843-7777 in the United States, and 800/361-3090 in Canada.

Q: I was using American Express Advance and trying to access my account information with my PIN number and my PIN number was not accepted. Whom should I contact?

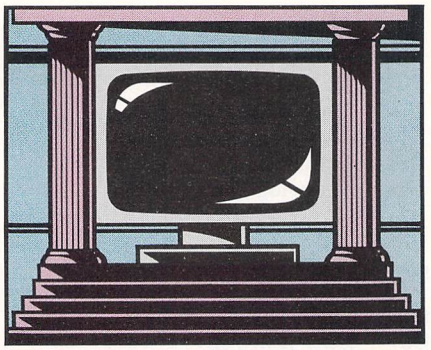
A: The problem is occurring once you have entered the American Express ADVANCE Gateway. You have been transferred to the American Express computers and since they assign and control the PIN numbers, you will want to contact American Express at 800/327-2177 or send a message in their direct Feedback area.

Gift of Time

Online Today offers subscribers the chance to write a 200-word essay on how they use CompuServe's Information Service.

Your essay should be typed double-spaced. Send it to *Online Today*, CompuServe Incorporated, 5000 Arlington Centre Blvd., P.O. Box 20212, Columbus, OH 43220, or by an Email message to 70003,1661. Please include your full name, address and User ID number.

Should we use your column, you will receive 10 hours of standard service connect time (a $60 value) and a byline.



Writer Researches on CompuServe

As a writer who also must work as a college teacher to pay the bills each month, I have found a wealth of information on CompuServe.

Before having access to CompuServe, I would spend a good part of a day getting needed information from a local research library. It would take me 45 minutes to drive to the library, 15 minutes to find a free parking space (after that I would give up and pay $3 for a space in a commercial lot) and then several hours to find the material I needed.

About 75 percent of the time, I have been able to find useful information through CompuServe — and at a great savings in time, money and energy.

In doing a chapter for a recent book, I needed two kinds of information: some basic facts and a cross-section of anonymous attitudes to reinforce personal interviews I had conducted. With a few sessions on CompuServe, I was able to fill in the gaps in my information.

In preparing lecture material for classes, I also find it easier to check first with CompuServe. For one thing, I can instantly get a hard copy to supplement my class notes. I regularly mention to my students the advantage of this approach.

Ron Whittaker, Ph.D.
Canoga Park, Calif.

Hallmark Color Mail.™ Your chance to send all your friends and acquaintances on CompuServe the kinds of outrageously embellished greetings they deserve...and would've sent you first if they could've! Greetings you can assemble and send with sounds, animated graphics, full color, performing words — for any occasion you like.

GO EBB or circle 8 on the Reader Service Form.

So get serious about having big fun when you communicate — and GO COLORMAIL right now. We've got a section on CompuServe that TELLS ALL! And remember, a picture is worth a thousand words but with Color Mail you also get flying bananas and the William Tell Overture.

* Available for Commodore 64,128 © and Apple II © Series of Computers.

Color Mail © 1986 Hallmark Cards, Inc. All rights reserved.

Cellular Modems

CompuServe Accessible to Executives on the Move

Messaging and database services are available to executives on the move now that CompuServe is accessible from cars equipped with cellular phones and cellular modems. An agreement reached earlier this year between CompuServe and Spectrum Cellular, a Dallas-based cellular modem manufacturer, makes this service available to subscribers in Chicago, New York, Toronto, Los Angeles, Atlanta and Dallas.

Here's how the system works: Spectrum's patented error-free modems convert digital computer data into radio signals that are transmitted via your car's cellular telephone antenna. These radio signals then are picked up by antenna receiving cells, coverted back into analog format and sent over telephone lines to CompuServe's host computers, equipped with Spectrum's fixed-based modem called The Span.

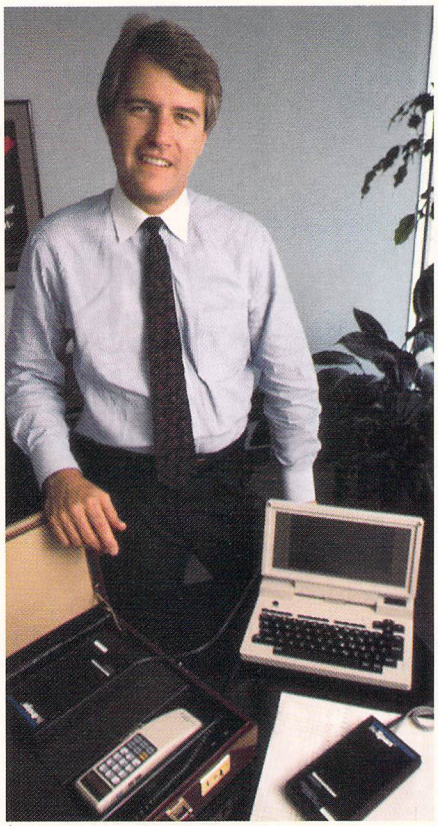
The Span receives data in packets from The Bridge, Spectrum's mobile modem that attaches to the portable computer in your car. As The Span receives the data and decodes the protocol, it sends back a message, called a "check sum," to The Bridge acknowledging receipt of the data. In the unlikely case that the data is scrambled or incomplete, The Bridge resends the data packet.

According to Patrick Mayben, Spectrum Cellular's executive vice president of marketing, this packet method of transmission eliminates loss of data resulting from interrupted and fading signals when they are passed from cell to cell as the modem-equipped vehicle moves. But, says Mayben, it's a mistake to assume that cellular modems should be used only in automobiles.

"What this cellular technology really does is provide the capability for portable data acquisition," explains Mayben. "You can install everything you need in a briefcase in one little bundle that gives you the capability to request or accept information anywhere. You're not tied to telephone wires or a 110-volt power source. The whole idea behind the cellular industry is much larger than car telephones."

Bill Duvall, CompuServe's vice president of network operations, agrees. "Our goal at CompuServe is to provide information to subscribers in as many ways as possible," says Duvall. "Cellular technology opens a new path for acquiring information — not just for traditional CompuServe products but for many new applications as well."

What types of people are likely to "go cellular?" According to Mayben, the answer is anyone needing quick, unfettered access to information. "A job site foreman out in the boonies somewhere lacking land-line phone service can use his cellular phone and modem to get decision-making information from the architect or general contractor," Mayben says. "Cellular technology definitely is not limited to use by people riding in limousines."



Providing portable data access: *Mayben*

Presently, however, it is limited to those 100 or so areas with cell sites for transmitting the signals. Two years ago, no cell sites existed, and Mayben says the technology is growing rapidly to keep pace with demand. "IBM filed documents with the FCC in 1985 stating that it expected the overall mobile data communications market to reach 2.4 million customers by 1990," he says. "We also will see phone companies extending their own coverage with cellular because putting up cell site towers is more economical than laying cables."

Technology removes barriers: *DuVall*

The cost for cellular access — an additional charge beyond the cost of accessing CompuServe — ranges from 15 to 40 cents a minute, depending on the market. FCC regulations require two cellular providers in every market, and Mayben expects this competition to drive prices down. "This cost is a small price to pay when you need vital information," says Duvall. "If you're a lawyer sitting in court with instant access to the information you need, for example, a few minutes of cellular access can be very important."

Among dozens of other applications are ship-to-shore communications; reporters filing news stories from locations lacking land-line phones; and real-estate brokers, insurance agents and field representatives getting instant access to sales information — even emergency medical personnel who need access to a patient's medical history en route to the hospital. "The mindset is that you have to be tied to a traditional telephone to do your job," says Duvall. "Cellular technology removes this barrier."

The cost of Spectrum Cellular's portable Bridge and fixed-base Span 1200-baud modems is $695 each. The products are available through Bell Operating companies around the country. Those who plan to communicate only through CompuServe do not need the Span modem because it already resides in CompuServe's host computers. "The end user can get on CompuServe and then go out the back door to the rest of the world," remarks Mayben. However, the Span is required for all communications — say, with your office-based host computer — that do not go through CompuServe.

For the name of a dealer near you, contact Spectrum Cellular Corp. at 800/233-2119.

— Carole Houze Gerber

The Span and The Bridge are trademarks of Spectrum Cellular.

FCC Requires Analysis Created by I/B/E/S

Before the Federal Communications Commission approves new telephone company rates for interstate service, a CompuServe service known as I/B/E/S will be consulted for data on company growth — not actual historical growth but estimations of future growth.

A recent FCC directive requires that when any of the eight Bell companies partake in FCC rate hearings related to interstate service they must prepare a regulatory analysis. The analysis has to include the earnings forecasts as they unfolded in each month for the last two years and the most recent projection of the five-year growth rate. I/B/E/S also is used for similar purposes by many state commissions involved in electric and gas utility cases.

The data available through I/B/E/S is well-suited to the FCC requirements. "One reason to use earnings estimates of financial analysts is that they are not prepared in contemplation of a rate case and are independent of any third-party commission or company," says Dale Berman, vice president of Lynch, Jones & Ryan, provider of the I/B/E/S service on CompuServe. "It is significant that I/B/E/S was selected, because it is the leading source of earnings expectations in the United States," adds Berman.

I/B/E/S collects estimates from more than 2,400 analysts at 130 institutional research firms. From this data, I/B/E/S representatives compute earnings per share estimates for the current and next fiscal years, the current and next fiscal quarters, and the long-term (five-year) estimated growth rate.

The estimates are available for more than 3,200 companies. Each company will have data items such as the mean estimate, median estimate, standard deviation, high and low estimates, and number of estimates collected.

The I/B/E/S Earnings Estimates are available to CompuServe Information Service subscribers with the Executive Option. To access I/B/E/S, type GO EARNINGS at any prompt on the CompuServe Information Service.

I/B/E/S also is available to CompuServe's commercial clients. Primary users include money managers, investment banking firms and brokerage houses, which use I/B/E/S to screen for companies having strong growth potential.

— Kathy Baird

For More Business Information

To obtain more information about CompuServe Business Information Service products mentioned in *Online Today*, contact the CompuServe branch sales office nearest you:

Atlanta, Ga.
(404) 231-1440
Boston, Mass.
(617) 267-2772
Chicago, Ill.
(312) 782-5409
Cincinnati, Ohio
(513) 771-8111
Cleveland, Ohio
(216) 241-6818
Columbus, Ohio
(614) 224-3113
Dallas, Texas
(214) 742-2888
Dayton, Ohio
(513) 223-6875
Denver, Colo.
(303) 629-5514
Detroit, Mich.
(313) 362-1860
Houston, Texas
(713) 237-8582
Indianapolis, Ind.
(317) 635-9686
Irvine, Calif.
(714) 752-7240
Los Angeles, Calif.
(213) 216-5867
Louisville, Ky.
(502) 585-4016
Memphis, Tenn.
(901) 452-8251
Miami, Fla.
(305) 264-6094
Minneapolis, Minn.
(612) 338-5678
New York, Commercial
(212) 486-2440
New York, Financial
(212) 668-0471
Parsippany, N.J.
(201) 898-1944
Philadelphia, Pa.
(215) 563-7607
Phoenix, Ariz.
(602) 863-1404
Pittsburgh, Pa.
(412) 391-8845
St. Louis, Mo.
(314) 241-0700
San Francisco, Calif.
(415) 777-2737
Santa Clara, Calif.
(408) 727-1468
Toledo, Ohio
(419) 243-2600
Washington, D.C.
(703) 391-0010
Westport, Conn.
(203) 222-1853

24 HOURS A DAY

NOW...PERSONAL COMPUTER TRADING THROUGH QUICK & REILLY

With commission savings of up to 70%

Now, with Quick & Reilly's *easy-to-use* QUICK WAY service, you can get quotes, place buy/sell orders, check your whole portfolio, review the latest research—*day or night*—on your own personal computer.

- The QUICK WAY system is easy to learn and use. You can do it in minutes.
- You can get quotes on any stock, option or market index listed in the Wall Street Journal.
- You can place orders in minutes, day or night. Reports are sent back on-line, followed by written confirmations.
- You can monitor, on a single screen, the prices of up to 18 stocks. (You can similarly monitor options.)
- You can have any number of trading accounts on the system for a single low subscription fee. (May be tax-deductible.)
- A double-password system guarantees the privacy of your account(s).
- QUICK WAY is available through CompuServe—the largest computer information network—which allows you instant access to Standard & Poor's Reports, Value Line Data Base II, and 10 years of market data on some 50,000 securities.

Computer traders, of course, also get all the regular customer benefits which have made Quick & Reilly the nation's largest independent discount broker, serving over 275,000 investors.

For complete information plus an on-line demonstration and application for QUICK WAY—type GO QWK. Or call us toll free.

800-672-7220

Securities held in your account are protected up to $2,500,000. SIPC

Quick & Reilly, Inc.
Members NYSE
120 Wall Street, New York, N.Y. 10005
Please send me your free brochure on QUICK WAY computer trading.

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

MAIL COUPON FOR INFORMATION PACK 126

GO EBB or circle 9 on the Reader Service Form.

CompuServe Has A New Way For Computer Owners To Get To The Bank.

Now just touch a few keys. And step right up to the counter at many leading national banks.

Imagine being able to perform dozens of banking transactions. Without stepping out the door.

- Transfer funds between savings and checking.
- See what checks have cleared as of NOW.
- Pay all your bills electronically.
- Check the status of your accounts.

Now it's all possible with online banking from CompuServe.

Choose from a list of online banks that's constantly growing:

- Bank One, Ohio
- Huntington National Bank, Ohio
- NCNB, North Carolina
- PSFS, Philadelphia
- Southeast Bank, Florida

Banking online means more privacy.

No one knows what you're depositing where. Because you bank right in the privacy of your own home.

Plus more accuracy.

Keeping your paperwork in the computer makes it easy to find. And because transactions are done electronically, your records are always up to date.

And more convenience.

We keep our door to the bank open around the clock. 7 days a week.

Of course, we give you hundreds of other ways to manage your money better, too.

- Monitor your investments with current market stock quotes.
- Investigate stock tips by studying the corporation behind the security.
- Trade stocks and options through our online discount brokerage.
- Plan trips and buy airline tickets at the lowest possible fares through our online travel services.
- Buy at discount prices in THE ELECTRONIC MALL.™

And do much, much more.

Why run to the bank ever again?

Get online and enter GO BANK at any ! prompt. You'll find all the information you need to make the trip to the bank a thing of the past.

CompuServe®

Information Services, P.O. Box 20212,
5000 Arlington Centre Blvd., Columbus, Ohio 43220

800-848-8199

In Ohio, Call 614-457-0802

An H&R Block Company.

THE ELECTRONIC MALL is a trademark of CompuServe Incorporated.

Business Briefs

CompuServe Checks Patient Medicare Eligibility

It was once difficult for health care providers to determine whether a patient was eligible for Medicare or instead had chosen to participate in a Medicare Health Maintenance Organization. Because Medicare does not pay the bill when an HMO patient seeks care elsewhere, many health care providers were confronted with unpaid bills.

But now, a CompuServe database listing virtually all 31 million Medicare beneficiaries can be accessed directly by health care providers through point-of-sale terminals. Health care organizations now can identify their patients' status to assure that the appropriate patients obtain all care through their HMOs, thereby eliminating rejected bills.

ARMS Automates Communication

A new CompuServe product known as Adjustment Reporting and Messaging System helps financial institutions that participate in Automatic Teller Machine networks operate more efficiently.

ARMS, an adaptation of InfoPlex, automates daily transaction error reports between members of an Automatic Teller Machine network, simplifying and standardizing the retrieval of adjustment information from network financial institutions.

Information on transaction errors is compiled in standardized form for easy analysis while explicit prompts assure the accuracy and completeness of data.

ARMS offers 24-hour access, less potential for error and faster transmission of information to ATM network financial institutions.

CompuServe Takes American Express

American Express now is an accepted means of payment for CompuServe, along with VISA, MasterCard and CheckFree.

There is no longer a need to receive a CompuServe bill in the mail. By selecting the American Express option, a user can have CompuServe charges billed directly to a charge card account. Those charges then will be listed on the monthly account statement. To change your billing option, type GO BILLING at any prompt. Charges for recent weeks also can be accessed by typing GO MONTH.

New SuperSite Version Offered

A new version of SuperSite now is available on the Executive Option of the CompuServe Information Service. In addition to retrieving information by ZIP code and county, users now can obtain demographic information for the entire United States, each state individually, Standard Metropolitan Statistical Areas, Arbitron television markets and Nielsen television markets.

The new version of SuperSite also includes four new reports. The Combined Demographic and Income Forecast and the Forecast Summary both include information for 1980, 1985 and 1990. The two other reports are based on the ACORN (A Classification Of Residential Neighborhoods) Target Marketing System, which classifies all US households into 44 market segments.

A change in the pricing of SuperSite places reports in categories of $25, $50, $75 and $100, with no extra charge for combining several geographic areas into one market. To access the service, type GO SUPERSITE at any prompt in the CompuServe Information Service.

American Express Adds IDS

American Express ADVANCE has added IDS Financial Services, which describes the American Express IDS subsidiary and gives examples of how IDS financial planners can help subscribers attain their financial goals. Also featured is a Financial Initials Quiz designed to test users' knowledge of acronyms such as SEC, FDIC and ERTA. The service may be accessed by typing GO AXP at any prompt.

News-A-Tron Offers Daily Quotes

News-A-Tron now offers daily quotes on US government mortgage bonds, including: Government National Mortgage Association bonds, Graduated Payment Mortgage bonds, Federal Home Loan Mortgage Corp. and Federal National Mortgage Association bonds. Also offered are daily quotes on several commodities, such as: petroleum products, precious and industrial metals, foreign exchange rates and grains. In addition, the updated service includes analysis of the credit market and of major market indices of use to commodities and secruities traders.

News-A-Tron can be accessed by typing GO NAT at any prompt in the CompuServe Information Service.

— Kathy Baird

Could *Your* Business be Affected By Happenings in the Computer World Today?

Find out in the *Electronic Edition* of *Online Today*. GO OLT from any prompt in CompuServe to get daily updated computer news.

ONLINE TODAY

INVEST BY COMPUTER

Central Asset Account
National Network
FREE On-Line Access

Harness your computer's power with UNI$AVE

- **Deep Discount Brokerage Rates**
- **Money Market Sweep Account**
- **Unlimited Check Writing**
- **Portfolio Accounting**
- **Open with only $1,000**

Many FREE Computer Services
FREE Access to View Account
FREE Access to View Positions
FREE Entry of Brokerage Orders
NO Application Fee
NO Minimum Monthly Charge
NO Software Purchase Required
On-Line Investment Research

Data for over 40,000 securities
Quotes - Stock Performance Ratings
Research Fees based on connect time

Discount Stock Commissions

Up to 240 Shares	$30.00
241 to 799 Shares	12½¢ per sh
800 to 1099 Shares	10 ¢ per sh
1100 to 2099 Shares	8 ¢ per sh
2100 to 3099 Shares	7 ¢ per sh
3100 Shares or More	5 ¢ per sh

Call 1-800-UMC-SAVE

Unified Management Corporation

Guaranty Building • Indianapolis IN 46204
MEMBER: Midwest Stock Exchange, NASD SIPC

GO EBB or circle 10 on the Reader Service Form.

Datavue 25

An Effective MS-DOS Portable Computer

Quadram Corp.
One Quad Way
Norcross, GA 30093-2919
404/923-6666

Computers: Datavue 25 (IBM PC compatible).
Operating System: MS-DOS 2.11.
Standard Features: 256K RAM expandable to 1.3MB; one 360K 5¼-inch internal diskette drive; internal electronic RAM disk up to 360K; 80 column by 25 line fluorescent backlit LCD display with 640 by 200 dot resolution in text mode and 320 by 400 dot resolution in graphics mode; built-in serial port (COM1), printer port (LPT1) and ports for external RGB or composite monitors; detached wireless keyboard; 110VAC power module; selectable LCD display palettes, contrasts and display inversion; customizable World Clock; built-in remote ("dumb") terminal software.
Options: Expansion unit housing up to three IBM PC compatible cards with or without 10MB hard disk ($1,695 with disk or $695 without disk); additional internal RAM expansions; cloth carrying case ($40); power adapter usable with car cigarette lighter ($150); 220VAC power adapter ($150); rechargeable battery pack ($65); add-on 5¼-inch physical diskette drive ($349); keyboard cable ($15); 300/1200 bps Hayes-compatible internal modem with bundled software ($495); dual internal 720K 3½-inch disk drives replacing standard 5¼-inch drive; internal 20MB hard drive; amber colored Gaslight display.

Model Tested: Basic 640K Datavue 25 equipped with one 360K 5¼-inch disk drive, backlit LCD display, 110VAC power module, one serial port, one parallel port and RGB and composite monitor ports; used with USRobotics' Courier 2400 modem and Amdek Color 700 RGB monitor; running Quadram's version of MS-DOS 2.11.

Base Prices: $1,695 for standard 256K model with single 5¼-inch diskette drive and normal LCD display; $2,095, $2,395 or $2,595 for 256K, 768K or 1.25MB models with dual 3½-inch drives and backlit displays; $3,495 for 256K model with 20MB internal hard disk, single 3½-inch diskette drive and Gaslight screen; other configurations and prices available.

Reviewed by Ernest E. Mau

Portable MS-DOS computers are becoming impressive! Not only are they truly portable compared with "luggable" machines like the Compaq or IBM PC Portable, but they no longer sacrifice features like display size or disk drives to attain small size and light weight. Furthermore, add-ons turn them into full-function desktop computers when necessary.

The Datavue 25 is a good example. This 12-pound machine is about one-third the size of a Compaq portable, yet has an 80 by 25 backlit display, one or more disk drives and all the operational features needed in a portable. While it won't fit in an attache case, it is easy to carry and can withstand wear and tear short of outright abuse. It easily connects to printers, modems and monitors.

Surprisingly, I fell in love with the Datavue. I always have had a deeply ingrained hatred of small computers and felt that bigger meant better. To me, miniature computers were little more than expensive toys. But the Datavue turned me around, and I grudgingly had to concede that I liked it.

Setting up the Datavue is simple. Just provide power (from a 110VAC outlet in my case), pop the keyboard off the front, tilt the LCD screen upward and put a bootable system diskette in the drive. Numerous internal DIP switches can control power-up and other operations, but few users need them unless the hardware configuration is changed. When power is applied, a setup screen allows the size of the RAM disk to be set from the keyboard, diverting working memory to that electronic disk as needed. Hitting the Enter key boots MS-DOS from the diskette, and the machine is ready for whatever application programs are needed.

My first time, I thought the computer was not working. All I saw after powering it up was a glowing white screen. Although I had released the screen from the chassis, I had not tilted it upward far enough. Six screen positions are allowed, and I'm tall enough that only maximum tilt gives a workable display. I also had to adjust the "color" palette, screen contrast, backlight intensity and inverse video with [CONTROL-SHIFT-] keystroke combinations to get a satisfactory display.

The ability to change palettes at a keystroke is important because such changes may be needed from one program to the next. The Datavue treats its

monochrome display like a Color Graphics Adapter, with software set up accordingly and colors displayed as a grayscale. Unlike similar approaches, the Datavue lets users adjust the palette and resulting grayscale for optimum readability. However, palette selection and other display controls work only for the built-in screen. They don't affect an external monitor, a great add-on for a stationary Datavue because the display can be switched from the LCD screen to the external monitor or back by tapping a key combination.

Be prepared for some visual disorientation, owing to the Datavue's screen shape — especially when switching between it and an external monitor. Although the screen displays 80 columns and 25 rows, its 9 by 4 inch area is wide but short, and distorts graphics and other displays.

I was surprised and somewhat annoyed to find that no BASIC language is included. The manual states that IBM and Compaq BASIC will not run and that buying GWBASIC, Better BASIC or some other generic interpreter may be necessary. That is only a half-truth because Compaq's disk-based BASICA worked perfectly.

I also booted and ran the Datavue successfully with IBM's PC-DOS 2.10 instead of Datavue's DOS. It would not recognize Compaq's MS-DOS. The ability to run PC-DOS is a good indication of high compatibility between the Datavue and the IBM PC. Every applications software package I tried worked. That does not mean every existing package runs, but most popular word processors, spreadsheets, database managers and graphics programs do. I even had a limited version of AutoDesk's AutoCAD running, plus the usual packages like WordStar, Word Perfect and others.

Most applications benefit from a second physical disk drive, adding to the computer's cost. However, using applications with the Datavue's RAM disk is possible — given the willingness to copy data to that RAM drive before using the programs and then remembering to copy completed work back to a physical diskette.

The backlit screen is delightful and makes the computer usable under almost any ambient lighting condition, unlike conventional LCD displays. Backlighting can be toggled on and off as needed, and the intensity can be changed to minimize eyestrain. I didn't have a battery pack, but I suspect that backlighting and disk accesses both shorten that operating time and should be minimized if the computer is not connected to constant power.

The keyboard takes some getting used to. Like most small computers, the key arrangement is radically different from a conventional IBM PC, so it takes time to feel comfortable with it. Furthermore, the "touch" is soft or "mushy" and lacks tactile feedback. Anyone using both a Datavue and a conventional PC must be prepared to continually adjust keying habits.

More of a problem is the wireless keyboard's tendency to miss characters. That's the one thing about the Datavue I did not like. Even when typing slowly, after carefully aligning the infrared sender and detector linking the keyboard and computer, I would lose one out of every 15 or so characters. Prospective users should include the inexpensive, detachable keyboard cable option in their purchase. It will provide a much more reliable connection.

I did not care for the built-in remote terminal function, but I don't care for "dumb" terminals anyway. First, I had problems hooking up an external modem because the manual has no wiring information. Beyond that, the internal software was good only for rudimentary communications like checking messages or typing directly to a remote system. Serious communicators are likely to bypass this function in favor of better programs with greater capabilities, especially for file transfers.

Nevertheless, the Datavue 25 is a great portable machine. It is not as fast or responsive as my 8mHz Deskpro, but it is at least a match for my Compaq portable. As I already said, I like this machine. But be careful! Of the many options, some, such as the hard disk or 3½-inch drives, must be factory installed. This computer should be configured properly when purchased, not afterward.

Ernest E. Mau, a full-time free-lance writer and Online Today *reviews editor, is based in Aurora, Colo. He is the author of several books and nearly 300 articles on microcomputer products and applications.*

GO EBB or circle 11 on the Reader Service Form.

GO EBB or circle 12 on the Reader Service Form.

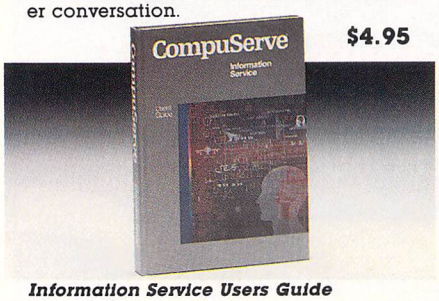
CompuServe By the Book

Enjoy CompuServe even more by reading these books that will help you get the most out of key products.

Let's Talk: An Introduction To CompuServe's Citizen's Band Simulator

Although you can teach yourself to access CB in a single session, you won't have any idea about the real capacity of CB until you read this primer for computer conversation.

$4.95



Information Service Users Guide

This is a source not only for "where to find it and what it does," but also a guide to getting the most out of key products and time saving features. Also includes:

- 11x17 System Configuration Wall Chart
- Forum and EasyPlex Users Guide
- Quick Reference Word Summary
- Handy Product Reference Card

$14.95

Complete descriptions and prices for all products available through CompuServe can be found online. GO ORDER at any ! prompt.

CompuServe

Corporate Headquarters
5000 Arlington Centre Blvd.
Columbus, Ohio 43220

An H&R Block Company

Amdek Color 722

Monitor Enhances Graphics Displays

Amdek Corp.
2201 Lively Blvd.
Elk Grove Village, IL 60007
312/364-1180

Computers: IBM PC, PC-XT, PC-AT or compatible computers equipped with and fully supporting the IBM Enhanced Graphics Adapter, IBM Color Graphics Adapter or a compatible video driver card.
Features: High-resolution RGB color monitor; 13-inch high-contrast display screen etched for glare reduction; 0.31-mm dot pitch; dual horizontal sweep frequencies of 15.75kHz and 21.8kHz; non-interlaced resolutions up to 720 horizontal dots by 240 vertical lines at 15.75kHz or 720 dots by 350 lines at 21.8kHz; 80 column by 25 line text display; 8 by 8 character matrix at 15.75kHz or 8 by 14 matrix at 21.8kHz; "text" switch for white (full-color), green or amber text display plus shaded green for graphics; displays 16 colors at 15.75kHz or 64 colors (16 at a time) at 21.8kHz; interface cable included; three year warranty on tube and two year warranty on other components; FCC and UL approved.
Options: Tilt/swivel stand.
System used for test: Compaq Deskpro Model 2 using three different video output devices: (1) standard RGB output available from the Deskpro's original graphics card, (2) an Array Technologies' Graphics Solution card and (3) an STB Systems' EGA Plus card.
List Price: $799 without tilt/swivel stand.

Reviewed by Ernest E. Mau

Amdek's new Color 722 monitor handles outputs from both CGA- and EGA-compatible video adapters with equal ease and switches between modes automatically to accommodate whatever signal it receives. I've successfully driven it with several video adapters including the standard Deskpro graphics card (CGA compatible), ATI's Graphics Solution with its 16-color Plantronics-compatible color mode, and an STB Systems' EGA Plus card.

The monitor provides crisp, stable, flicker-free displays. Amdek often claims its monitors are so good that brown looks like brown. It's true! Color-bar checks were beautiful, with all colors including brown and dark gray looking as "true" as I could ask. I saw no bleeding of colors into backgrounds or overlapping from one to another except for a slight 1/32-inch vertical misalignment of the "blue" image in the extreme lower left corner. I saw no "pincushion" or "barrel" distortion in any text or graphics.

When first using high-resolution text generated by the EGA Plus card, I had the impression that the monitor was out of focus, but it wasn't — I was fooled by the small dot size combined with the etched non-glare screen. There was some slight fuzziness in the extreme upper right corner, but that wasn't excessive.

The "text" pushbutton is particularly interesting. Pressed once, the screen provides green on black text. Pressed again, it changes to amber on black (with brown highlighting). A third press provides eight-shade green graphics. A fourth press returns to normal white or full-color display. Each is crisp and sharp, and I have grown fond of amber for word processing without eyestrain.

This monitor is somewhat noisy when switching between standard and enhanced resolutions. The first few times I heard the surprisingly loud clicks, I thought the monitor had blown. But the sound is normal.

Of course, not everyone needs an enhanced color display, but those who do will find that a good monitor is a prerequisite. Amdek's Color 722 fills the bill nicely.

Ernest E. Mau, a full-time free-lance writer and Online Today *reviews editor, is based in Aurora, Colo. He is the author of several books and nearly 300 articles on microcomputer products and applications.*

GO EBB or circle 13 on the Reader Service Form.

Need to Keep Up With the Computer and Information Industries?

We publish all the computer industry news every day in the *Electronic Edition* of *Online Today*. GO OLT from any prompt in CompuServe and choose "Monitor Daily News" from the main menu.

ONLINE TODAY

Votrax

Personal Speech System for Microcomputers

Votrax Inc.
1394 Rankin
Troy, MI 48083-4074
313/588-2050

Computers: Any computers having serial or parallel interface ports.
Operating Systems: Not Applicable (no software included).
Required Peripherals: None.
Other Requirements: RS-232C serial port or parallel port.
Optional Items: Custom cables available from Votrax at prices dependent on computer.
System used for test: 640K IBM PC with one 20MB hard disk, one 360K double-sided, double-density diskette drive, AST SixPakPlus with serial port, IQ Technologies' SSB1000 Smart Switch Box.
Base Price: $395

Reviewed by James Moran

Talking computers once were the fantasies of science-fiction writers. However, reality took hold, and commercial users of computers found the applications and equipment to give voice to their mainframe computers. What large commercial users found necessary soon became a matter of intrigue for personal computer users, and inexpensive speech synthesizers soon made their way to the personal computer market.

Votrax has been manufacturing speech synthesizers for years. I first became interested in them about four years ago when I discovered that their Type 'N Talk model could be made to talk through one of the original *Adventure* games. Although talking dragons were great fun to hear, they really were not a good justification for laying out several hundred dollars. It quickly became apparent that the real power in Type 'N Talk was the ability to hook it into virtually any type of program. The device was treated as a serial peripheral, and programming it wasn't too complicated.

The Votrax Personal Speech System is a significant improvement over the Type 'N Talk that was attached to my system. This new peripheral is completely self-contained, including an on-board speaker. Besides producing speech via literal English, the Personal Speech System produces sound effects and music. A special sound chip produces all but the speech output, and a Z80 microprocessor controls the entire unit. Unlike the older unit, the Personal Speech System can accept data through either serial or parallel ports. Another improvement is a 3,500-character buffer that speeds up throughput with quick data transfers.

Hardware installation requires no special procedures and is pretty much a "plug in and go" operation. However, cabling may require some special preparation if the serial interface is chosen (parallel and serial inputs both are standard). The parallel interface is a standard Centronics connection, but the serial interface requires a custom cable to accommodate the particular computer to which the Personal Speech System is being connected. For those who don't feel comfortable making up their own cables, Votrax can supply custom cables at additional cost.

The system powers up ready to accept ASCII data for translation into speech, or phonemes may be programmed directly into the speech synthesis chip. Phonemes are a kind of code that the system recognizes as instructions for the speech chip to follow. The phoneme codes bear no visible relationship to speech and are obtained from a phonetic speech dictionary included with the Personal Speech System.

The phonemes are required to reproduce some sounds exactly, especially since ASCII text input does not always create the proper pronunciation. As an example, the endings on the words "hey" and "day" sound the same but use different vowels in their spelling. If sent to the Personal Speech System in ASCII mode, they produce different ending sounds. The use of phonemes corrects this problem with our native tongue.

Programmability of the Votrax unit is impressive for a device of its size and price. Under user control are the speech rate (rhythm), amplitude and fade (emphasis), and inflection level (intonation). Sound effects and music also can be controlled extensively. Three separate envelopes can be set as well as eight octaves of music. Sound effects and music also can be mixed simultaneously for special effects.

Personal Computer users with a serious interest in speech synthesis will find the Votrax Personal Speech System highly advanced and packed with capabilities. Documentation that comes with the unit is improved greatly over earlier Votrax models but would be insufficient for novices. That is not to say that the documentation is poorly done, only that it assumes a certain level of prior knowledge.

Although the sound of the synthesized voice remains so mechanical that nobody could confuse it with a human voice, the Votrax Personal Speech System is a good buy for anyone seriously interested in working with voice and sound synthesis.

James Moran is a free-lance writer and frequent contributor to Online Today. *His CompuServe User ID number is 70007,2253.*

GO EBB or circle 14 on the Reader Service Form.

Free Prospectus!

FIDELITY FUNDS

The Hot Ones!
Magellan
Overseas/OTC

While on CompuServe
GO TKR
Call toll free
(800) 223-6642
In New York Call
(212) 687-0705
Via modem 5:00 PM - 9:00 AM
and 24 Hours on Weekends
(212) 986-1660

MaxUle&
Company Inc.
202 East 39th Street, N.Y., 10016

Continuous Discount
Brokerage Service Since 1972

GO EBB or circle 15 on the Reader Service Form.

Want to Read More Hardware Reviews?

GO OLT from any prompt in the CompuServe Information Service and choose "Product Reviews" from the main menu.

ONLINE TODAY

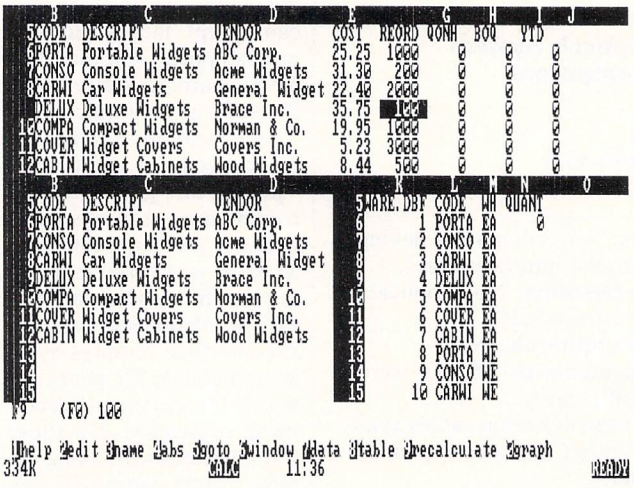
VP-Planner:

The Power of Lotus 1-2-3 at a Fraction of the Cost

Paperback Software
2612 Eighth St.
Berkeley, CA 94710
415/644-2116 (information)
800/443-0100 (orders)

Computers: IBM PC, PC-XT, PC-AT and compatibles.
Operating Systems: PC-DOS or MS-DOS 2.0 and higher.
Media: Requires at least one 360K floppy disk.
Copy Protection: Requires key disk to start; non-copy protected disk available to registered owners for $10.
Required Peripherals: Requires graphics board to use graphics features.
Other Requirements: Minimum of 256K RAM.
Optional Items: None.
Systems used for test: 640K IBM PC with one 360K floppy disk, one 10MB hard disk, Hercules Graphics Card and monochrome monitor; also tested on Compaq Portable Computer and IBM PC with color graphics card.
List Price: $99.95

Reviewed by Harry Green



Considering the millions of dollars IBM PC clones have earned, it was natural that someone would imitate popular software. VP-Planner emulates the most popular package of all, Lotus 1-2-3.

Is it possible that a low-cost spreadsheet can equal or even surpass the best selling program for one-fifth the price? Before answering that question, I have two confessions: first, I'm an unabashed fan of Lotus 1-2-3; second, although I have used 1-2-3 regularly for nearly three years, it has capabilities I have never exercised. My review of VP-Planner is based on the 1-2-3 features I use regularly, plus features introduced with this package.

For the review, I used VP-Planner in place of 1-2-3 for two months, creating spreadsheets and running existing models with no modifications. Aside from minor differences in menu descriptions and the fact that VP-Planner's menu is at the bottom of the screen, I would never have known this wasn't 1-2-3. Existing spreadsheets, including macros, worked perfectly. Keyboard macros are an excellent test of compatibility because any keystroke differences show up immediately.

I ran speed tests and found 1-2-3 somewhat faster in table lookup but slower in sorting. On balance, the two should run at about the same speed. A minor difference I noted is that VP-Planner does not highlight unprotected cells in a protected worksheet.

In almost every function I tested, VP-Planner equals 1-2-3, but now on to the question of whether it excels. VP-Planner introduces several features that are significant improvements.

For example, it uses function keys more effectively than the regular 1-2-3 functions. When a menu is selected with a slash command, submenus can be chosen with function keys that are highlighted next to the menu designation. This may not seem important, but when trying to switch back from VP-Planner to 1-2-3, I instinctively reached for function keys I found convenient.

Another useful feature is an option that backs up the spreadsheet instead of overwriting it when a file is saved. VP-Planner displays a clock at the bottom of the sheet, and shows how much room is left on the disk. It is compatible with graphics and color monitors without needing drivers. I used the same disk on a Compaq, an IBM PC having a Hercules board and an IBM PC having a color board without any initialization. VP-Planner also includes a function to learn macros as you step through the commands — a real time-saver for creating macros.

Most differences between 1-2-3 and VP-Planner are matters of convenience. Possibly some now are included in 1-2-3 version 2.0, which I have not used, but a significant difference is VP-Planner's database function. It can read and create files compatible with dBase II and III. This feature can display the entire database within the limits of available memory, using the spreadsheet as a window into the database. Do you have dBase II files that dBase III can't read? VP-Planner can read a dBase II file and save it in dBase III form. I tested this on some old dBase II files, converted them easily, and dBase III couldn't tell the difference. Scanning a database in spreadsheet mode may be the solution to a problem you don't know you have, but if you do, VP-Planner handles it.

Fortunately, Paperback Software did not scrimp on documentation. The manual is bound in softcover and the spine has an unfortunate tendency to split. Aside from the binding, the manual is complete and congenial. It is not difficult to learn VP-Planner from the manual alone because it has an excellent tutorial that demonstrates each feature. The tutorial assumes that you know the basics of 1-2-3. If not, you can take advantage of the wealth of readily available 1-2-3 literature.

Possibly there are some Lotus features that VP-Planner lacks. Its authors claim complete compatibility, but I didn't test everything. What I did test will handle the vast majority of spreadsheets in use today, so I have no hesitation in recommending VP-Planner as an excellent value. The advent of low-cost, high-quality software like this is a boon to users because it inevitably will drive down the cost of software, just as hardware costs have declined. This package is a true bargain.

Harry Green is president of Pacific Netcom Inc., a Portland, Ore., firm that consults with businesses on using office automation and telecommunications to improve productivity. His CompuServe User ID number is 70007,431.

GO EBB or circle 16 on the Reader Service Form.

The world's first Electronic University

Accredited College Classes & Degrees via your Computer

Imagine taking an accredited Creative Writing class right in your own living room; or studying marketing with a professor 2500 miles away; or having a reading tutor available for your child 24 hours a day.

For the first time ever, college credits, plus undergraduate and graduate degrees, are available through your personal computer. Universities and colleges themselves are offering their classes and programs on the Electronic University Network.

Additionally, classes in the arts, skills and career development, and an array of computer courses are available. And more are being added every day.

The Electronic University Network is a new way to take real classes, from live instructors, at your own pace, right in your own home, right on your own computer.

The Network easily connects your personal computer to colleges, universities, and tutors all across the country—right through your modem. No computer knowledge is required to use the Electronic University, and it is very affordable.

Free Communications on All Courses

Your lifetime enrollment in the Electronic University Network provides free communications on all courses. Classes range from $35 to $375, and you can register for courses electronically, at any time, through your modem.

Chances are that your company's Tuition Refund Program will even cover your course costs. Your one-time enrollment also grants access to a variety of services such as the Counseling Center and an Electronic Library.

We believe that the Electronic University provides the most meaningful reason for having a computer in your home. Education and learning have always supplied the foundation for individual growth, values and accomplishments. Now the personal computer, together with the Electronic University, delivers the most convenient, flexible new opportunity for all members of your family to continue their education—at whatever level they choose.

For more information on courses and programs call toll free:

800-22LEARN (outside California)

800-44LEARN (in California)

THE ELECTRONIC UNIVERSITY NETWORK
505 Beach Street • San Francisco, California 94133 • 415/928-2800

GO EBB or circle 17 on the Reader Service Form.

Mutual Fund Investor

Investment Management Software

American River Software
1523 Kingsford Dr.
Carmichael, CA 95608
916/483-1600

Computers: IBM PC, PC-XT, PC-AT and compatibles.
Operating Systems: PC-DOS or MS-DOS release 2.0 or higher.
Media: Requires at least one double-sided disk drive.
Copy Protection: None.
Required Peripherals: IBM color/graphics card or compatible adapter with graphics monitor.
Other Requirements: Minimum 192K RAM.
Optional Items: Hayes-compatible modem.
System used for test: 640K IBM PC-XT with Persyst Color Combo Card, Amdek RGB monitor, two diskette drives, Maynard 20MB hard disk, Hayes Smartmodem and Okidata Microline 84 printer; running PC-DOS 2.1.
List Price: $125

Reviewed by William J. Lynott

Investment management software, scarce only two or three years ago, now is in abundant supply. More than a dozen programs have been introduced in just the past 18 months or so.

Most such programs, however, are designed primarily for monitoring stock and bond investments. The specialized requirements for analyzing the performance of mutual funds have been given little attention. Mutual Fund Investor has been designed specifically to fill that gap.

With more than 600 mutual funds to choose from, the typical fund investor needs help to decide among buying and selling choices every bit as much as investors in individual stocks. Mutual Fund Investor is capable of providing some of that help.

The complete program comes on two diskettes: the program disk and the data disk. As few as one and as many as 50 different funds may be tracked on a single data disk. By making copies of the original data disk, or by using a hard disk, an unlimited number of funds may be monitored. Complete data on 20 popular funds is included with the program for use with the users manual as a tutorial for learning the basics.

Program installation involves nothing more than a few simple steps, such as identifying which drive or subdirectory will contain the data diskette. A master list of 50 funds is included on the original data disk and is divided into four categories: aggressive, moderate, conservative and special. You may add to or delete from this list to create any combination of funds you want to analyze. You also may alter the classifications to suit your own requirements.

As in most of today's investment software, Mutual Fund Investor lets you enter the necessary tracking data manually if that's your preference. Everything you need can be found in the financial pages of major newspapers. For most users, though, the ability to download all data automatically from CompuServe will be the most practical way to handle this chore. Of course, you must be a CompuServe subscriber to use this feature, and the usual online charges apply. However, considering the enormous amount of data required to compare mutual fund performances, I can't imagine the practicality of manual entry unless you're monitoring only a few funds at any given time.

Mutual Fund Investor does a good job of blending graphics into the process of comparing funds with each other and with themselves on a moving average basis. All you need to do to create a graph is follow the menu prompts. Once you choose the fund to be displayed on a graph, the job is done with startling speed. Using a hard disk, no more than two or three seconds was needed to display a graph on the screen, and floppy-drive systems require only a few seconds longer.

Individual graphs compare a fund's actual prices over a designated period with its moving average over the same period. The graph's right side displays a scale of prices, and time is displayed along the horizontal axis at the bottom. The graphic display of a fund's price compared to its moving average provides an excellent trend analysis. A single keystroke calls up a program-generated buy/sell signal.

You can compare the performance of any two funds on the screen by superimposing their performance curves. You also can display the graph for the Standard & Poor's 500 market index and compare its volatility (range of up or down price movement) over the same time period with a list of funds of your choosing.

One feature that is bound to be attractive to many potential users is Mutual Fund Investor's ability to work with random data input. While some investors have the self-discipline necessary to update data at least every week, others approach the job more casually with entry at odd or irregular intervals. Mutual Fund Investor works equally well with either approach.

If you are an active investor in mutual funds, or plan to be, Mutual Fund Investor is worth consideration. It will help you organize data for any group of funds that interests you, and it then helps with that all-important decision of when to buy or sell.

William J. Lynott is president of W.J. Lynott Associates, a management consulting firm in suburban Philadelphia. His CompuServe User ID number is 70007,420.

GO EBB or circle 18 on the Reader Service Form.

VideoWorks

Puts You In The Director's Chair

Hayden Software Co. Inc.
600 Suffolk St.
Lowell, MA 01854
617/937-0200 or 800/343-1218

Computers: Apple Macintosh 128K or 512K.
Operating System: Macintosh desktop environment.
Media: Three different diskettes provided.
Copy Protection: Master disk insertion in drive required to operate software.
Required Peripherals: None.
Other Requirements: None.
Optional Items: 512K Upgrade for 128K Machines, external disk drive, hard disk.
System used for test: 512K Apple Macintosh with internal drive and Apple ImageWriter printer.
List Price: $99.95

Reviewed by Joe Farace

When I was growing up, I wanted to be Walt Disney. As I got older, I partially achieved this goal by creating multi-projector slide shows. Unfortunately, it takes lots of projectors to obtain the fluidity of "real" animation. Now Hayden's VideoWorks lets me create the same kind of animation effects seen on television and in the movies, but on a Macintosh and in black and white.

VideoWorks comes with a system disk, a "clip art" disk and a "movies" disk. The manual, written by Nicholas

Lavroff, combines solid information with a highly readable style. The beginning of the manual includes a brief history of animation and computer animation before it gets to the "guided tour" tutorials. Even if you don't think you'd be interested, take the time to read it and discover the fascinating origins of animation.

You can get started without the tutorials, but following them will have you animating a bouncing ball within minutes. The thrill of watching that first animation happen the way I wanted it to was similar to the excitement I felt when processing my first black-and-white print in a darkroom. If you're in a hurry to see what VideoWorks will do or just want to impress your non-Mac friends, stick the system disk in the internal drive, put the "movies" disk in an external drive and click on "Apeing Around." Within seconds, the screen is alive with King Kong grasping Fay Wray in his right paw while swatting biplanes with his left.

Original animation artwork can be created by VideoWorks' "CheapPaint," which is a quick and dirty version of Apple's MacPaint. If you like, you can import artwork from MacPaint in either original or digitized form. If you can't draw a line, you can get started by using Hayden's own Artwork disk or a disk from one of many third-party companies that offer clip art. One of my favorites for realistic artwork that makes great VideoWorks' backgrounds is the Photo Album in Design Loft's Macinshots package. Note, however, that while VideoWorks works fine with a single drive 512K Macintosh, an external drive is needed for convenient use of "clip art" disks.

One handy tool included with VideoWorks is Hayden's Art Grabber desk accessory. It lets you grab an entire MacPaint image and paste it into CheapPaint for modification or into the "Cast" window for animation. This is done without having MacPaint resident on the disk!

VideoWorks provides 24 "tracks" of visual action, so you can create up to 24 elements or "cast members" to produce a range of animated effects. While that may seem like enough, effects that involve objects moving toward or away from you must be created in a variety of sizes to make the action realistic. Each size takes a separate track, so the 24 available tracks can get used up fast. Careful selection and creation of foreground and background artwork is required to maximize visual effectiveness.

VideoWorks is enhanced by the many tools included. "Score" lets you place different elements in layers and also lets sound be integrated into the action. Numerous music and sound effects are built into VideoWorks' "Sfx" window, and it won't take long to add sound to your first project. In addition, an "Efx" window permits the use of "mattes" and other standard animation special effects. With a little practice, you'll be able to create something equally as interesting as "Apeing Around."

OK, I know you're thinking that this is a game, but it isn't. Instead of being just a construction kit, VideoWorks is a tool for creating on-screen animations simply and easily. For instance, you can produce bar or line graphs that move and grow. Television producers or designers can use the program to emulate logo animations before going to the expense of producing the real thing. I'm using it to create animated storyboards for slide shows. Instead of showing "flat" art to a client, I can show the actual on-screen action complete with sound effects. This electronic storyboard also helps me communicate with the graphic artists that will produce the final artwork used in the finished slide show.

VideoWorks provides the most fun I've had with computers since I bought my Macintosh more than two years ago. At the same time, it is proving a valuable tool in my day-to-day business activities. Even if you don't have my specific needs for an animation tool, VideoWorks can help you explore some visual capabilities that the Macintosh concept has promised but rarely delivered.

Joe Farace is a writer and photographer from Denver. He is a contributing editor of PhotoMethods *magazine and his reviews of Macintosh software will appear in an upcoming book from Arrays Inc. His CompuServe User ID number is 76703,3060.*

Turn the Electronic Page For More Software Reviews

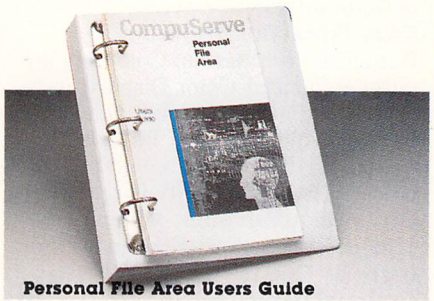
You'll find dozens of new software reviews in the *Electronic Edition* of *Online Today*. GO OLT and choose "Product Reviews" from the main menu.

ONLINE TODAY

GO EBB or circle 19 on the Reader Service Form.

Make The CompuServe Connection!

Enjoy CompuServe even more by ordering these books that will help you get the most out of key products.



Personal File Area Users Guide
File management programs, text editors, disk storage techniques, EasyPlex shortcuts, and more are documented in this new guide. An EDIT Reference Card includes summarized commands for editing documents in your personal file area, EasyPlex messages or other text. Binder not included.

$10.95

Professional Connection™ Communication Software
No one links your IBM PC, XT or PCjr to CompuServe like CompuServe. Includes all the features of VIDTEX plus:

- High resolution COLOR graphics
- User-defined phone directory
- Powerful command language
- Programmable function keys
- Fully-redefinable keyboard

$59.95

Complete descriptions and prices for all products available through CompuServe can be found online. GO ORDER at any ! prompt.

CompuServe®

CompuServe Headquarters
5000 Arlington Centre Blvd.
Columbus, Ohio 43220
An H&R Block Company

Color Magic

Packs Color into Enhanced Graphics Displays

Lifetree Software Inc.
411 Pacific Ave.
Monterey, CA 93940
408/373-4718

Computers: IBM PC, PC-XT, PC-AT and most compatibles.
Operating Systems: PC-DOS or MS-DOS version 2.0 or higher.
Media: Requires one double-sided diskette drive.
Copy Protection: None.
Required Peripherals: Color monitor (IBM Enhanced Color Display or compatible monitor recommended but not required); IBM Enhanced Graphics Adapter or compatible video card (EGA capability is required).
Other Requirements: Minimum 128K RAM (memory-resident portion occupies 1K).
Optional Items: None.
System used for test: 640K Compaq Deskpro Model 2 with two diskette drives, 20MB IOMEGA Alpha-10 Cartridge Drive Subsystem (Bernoulli Box), Amdek Color 722 RGB monitor, STB Systems' EGA Plus video display adapter set to enhanced color/high-resolution mode.
List Price: $39.95

Reviewed by Ernest E. Mau

After spending $1,000 on an EGA-compatible video adapter and matching monitor, you find many applications either can't use your new color capabilities or generate garish, even abhorrent colors. What can you do?

Color Magic should spice things up. This utility for EGA-equipped systems puts color into programs never designed for color and can change colors you dislike in other programs. You choose your palette and control every color in it. Want amber with green highlights? How about a pure gray/blue scale? Those and many others are available.

A 1K memory-resident program intercepts certain interrupts and converts colors according to your predefined color "chart." You control the "chart," and any color can be replaced by any one of 64 other colors. To see a program's original colors, Color Magic can be turned off with a keystroke.

Substitutions are selected with a non-resident program that displays colored charts. You can choose from 15 preprogrammed palettes, or you can define and store up to 48 customized palettes. Within each, you can pick individual color replacements.

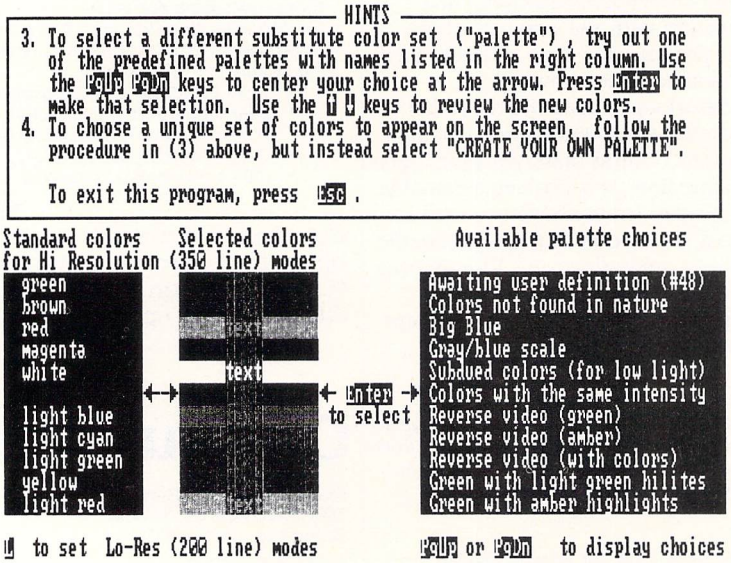
Once active, Color Magic displays the chosen palette instead of whatever colors (or lack of colors) normally appear, and it works in any video mode supported by the EGA card (including CGA mode). A few programs can override Color Magic and revert to their own color schemes, but they are rare.

I like Color Magic for testing color combinations without reinstalling applications programs. On finding a combination I like, I sometimes can install it permanently, or I can continue using Color Magic to provide it.

After a while, this beautifully done utility becomes almost indispensable.

Ernest E. Mau, a full-time free-lance writer and Online Today *reviews editor, is based in Aurora, Colo. He is the author of several books and nearly 300 articles on microcomputer products and applications.*

GO EBB or circle 20 on the Reader Service Form.



Fact Cruncher

Structures Information In Outline Format

InfoStructures Inc.
P.O. Box 32617
Tucson, AZ 85751-2617
602/299-5962

Computers: IBM PC, PC-XT, PC-AT and 100 percent compatibles.
Operating Systems: PC-DOS or MS-DOS version 2.0 or higher.
Media: Requires two diskette drives or one diskette drive and a hard disk.
Copy Protection: None.
Required Peripherals: Any attachable 132 column printer.
Other Requirements: Minimum 256K RAM.
Optional Items: None.
System used for test: 640K IBM PC with one 20MB hard disk, one 360K double-sided, double-density diskette drive and Epson FX-80+ printer; running PC-DOS 2.1.
List Price: $99.95

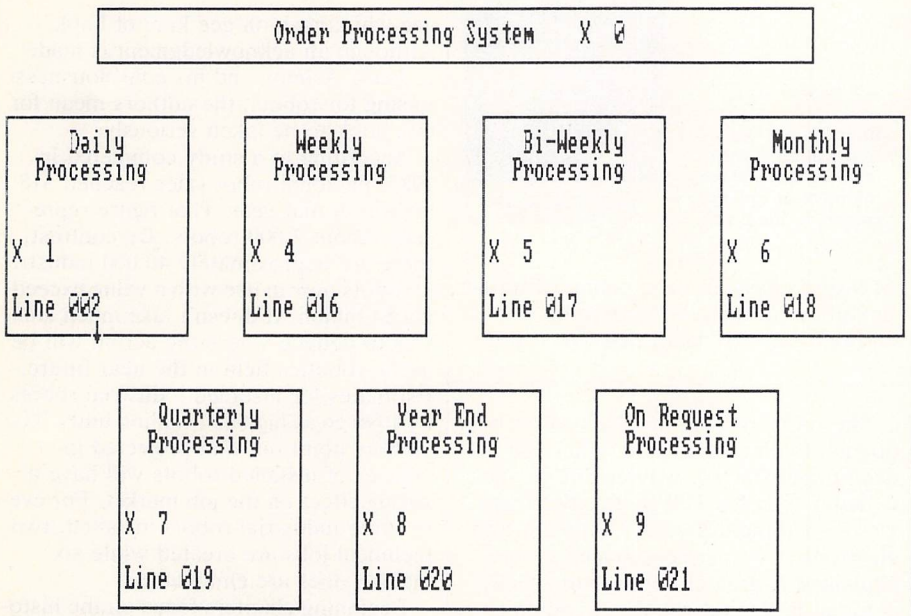
Reviewed by James Moran

A problem many of us suffer from is difficulty in organizing our thoughts. Whether clarifying the presentation we are to give at a meeting or organizing a "things to see" list while on vacation, we sometimes can't quite clarify and order our thoughts and ideas.

As most of us soon discover, computers are great organizers when equipped with appropriate software tools. To a computer, organizing thoughts is no different from organizing a mailing list or manipulating words. So it is no surprise that outline processors, among the new developments in personal computer software, are gaining a popularity that attests to their effectiveness.

Fact Cruncher could be called an outline processor. Generically, it does belong in that classification. However, it is a bit more advanced than other outliners I have seen, and it is very fast. Besides outlining, this software will convert outlines to charts, a handy capability for business users. Another unusual feature is its three editors: one for the outline processor, another as a word processor and a third as a data file editor usable in creating and updating files intended for other software packages.

To install Fact Cruncher, the files are copied from the distribution diskettes to either working diskettes or to a hard disk. For systems equipped with something other than the default IBM or



Epson printers, a special utility is supplied to generate and install most codes required for the other printers. However, it is necessary to enter the specialized codes found in the printer's manual. This isn't a complicated procedure, and the menu-driven utility provides enough instruction so that nontechnical users will have an installed system in less than 10 minutes.

Using Fact Cruncher is a snap, but requires some getting used to for those not familiar with outline processors. This software has numerous facilities, so users should expect to spend a few hours learning the system's operation. An example diskette is provided to ease the learning process. Menus are a part of the system, though, so even novices can navigate through the program and use it effectively.

In the three editors included with Fact Cruncher, similar functions use similar commands so switching between them does not require much readjustment. Commands are simplified and need minimal keystrokes. Command mode and editing mode don't require switching from one to another, and there are no pull-down menus to slow operations. If you get going so fast you inadvertently delete some text or outline data, an undo command quickly restores the deleted information.

The system also has dual windowing capability so two files can be edited simultaneously. Data can be transported between windows, and the windows may contain any combination of the three allowable file types (outline, text or data). Fact Cruncher also allows the same file to occur in both windows, say for editing in one while browsing through the material in the other.

Once outlines are created, a system utility will convert them into text. Indentation can be preserved if desired. People who outline in phrases will find this a quick way to write: simply convert the outline to text format, flesh out the text with the word processing (text) editor, and a completed story, report or narrative is ready. Other utilities with Fact Cruncher transform outlines into tree-structured hierarchy charts or transform word processing text into pure ASCII with formatting characters removed.

No matter how you generate ideas, you will find Fact Cruncher an excellent tool for organizing thoughts. Its word processor may not be on the level of large-scale, professional tools, but it is more than adequate for all but the busiest professional writers. The software is exceptionally fast in use but simple to control. If you could benefit from an advanced outline processor, check this one out.

James Moran is vice president of Programming Service Corp., a Midwestern consulting and research firm. His CompuServe User ID number is 70007,2253.

GO EBB or circle 21 on the Reader Service Form.

ACCESS AMERICA

Access newspapers, online, with the nation's largest full text newspaper databank. With VU/TEXT you also get business and financial information, maritime reports, news wires, stock quotes and more. For more information write or call **800-258-8080,** in PA **(215) 665-3300.**

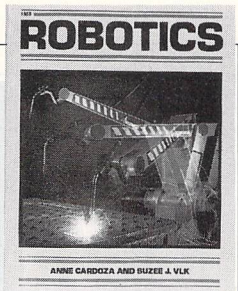
VU/TEXT™
A Knight-Ridder Company
1211 Chestnut Street, Philadelphia, PA 19107

Available via Compuserve's IQuest - GO IQuest

GO EBB or circle 41 on the Reader Service Form.

Robotics

By Anne Cardoza and
Suzee J. Vlk
TAB Books, 1985
150 pages, $10.95 (softcover)
Reviewed by James Moran



Robotics is a book that will be of most interest to those who might want to begin careers in the field.

"A robot is a reprogrammable multifunction manipulator designed to move materials, parts, tools, or specialized devices through variable programmed motions for the performance of a variety of tasks." Readers who come upon that definition on the second page of *Robotics* quickly learn that this is not a gee-whiz, gosh-oh-gee kind of book. Although an acknowledgment is made to Isaac Asimov and his consciousness-raising for robots, the authors mean for this book to be taken seriously.

According to a study completed in 1983, personal robot sales reached $18 million in that year. That figure represents about 7,000 robots. By contrast, there are approximately 40,000 industrial robots now in use with a value exceeding $4 billion. It doesn't take much analysis to deduce where the action will be in the robotics field in the near future. Estimates for installed industrial robots by 1990 go as high as 1 million units. The authors point out that projected increases of installed robots will have a strong effect on the job market. For every three industrial robots installed, two technical jobs are created while six manual ones are eliminated.

Beginning chapters focus on the history of robots and how they were developed. The book continues with explorations into the current uses for robots in industry and why they now are becoming a necessity for many manufacturing operations.

The authors devote most of their effort to the last third of the book. The beginning chapters — while mildly interesting — are only an introduction to the real emphasis of the book: robots and how to tie your future to their growing presence.

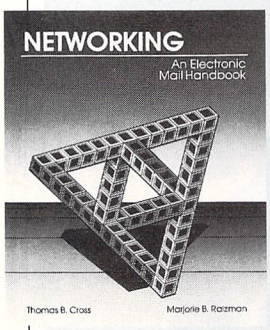
The final two chapters carefully explore the field of robotics manufacturing and education. Descriptions of the companies that manufacture robots are presented with detailed explanations of each robot's capabilities and the industries for which it is most suited. Here also are specifics on robotics training and education. In-depth descriptions of courses are offered for every known robotics training association, school or college. Course descriptions include contact person, fees and a general summary of the course or program being offered.

Robotics is a book that will be of most interest to those who might want to begin careers in the field. The simple, straightforward writing makes the book easy to digest in one sitting. There is not a lot of technical information to bog down the reader unnecessarily. I would expect *Robotics* to find a place among career-directing books in many high school libraries.

James Moran is the editor of Compu-Syn, *a syndicated news service that specializes in computers and robotics. His CompuServe User ID number is 70007,2253.*

Networking:
An Electronic Mail Handbook

By Thomas B. Cross and
Marjorie B. Raizman
Scott, Foresman and Co., 1985
216 pages, $18.95 (softcover)
Reviewed by William J. Lynott



You will find it to be a thorough and eminently readable book on an overworked subject.

As I gave this book a preliminary look, I once again had to ask myself if the world needs yet another epistle on the joys of telecommunication. In case you haven't noticed, books that tell you all about how to use your computer to communicate with other computers are appearing with monotonous regularity. Dozens of them have been published in the past couple of years.

So why would a major publisher want to come out with yet another? What possibly could be said about the subject that hasn't been covered already in sometimes painful detail?

Well, don't go away. Networking is worth another look.

In the opening chapters, I was beginning to succumb to those old feelings of *deja vu*. Even the obligatory glossary of technical terms and the old familiar guide to suppliers were there. Hadn't I read all of this before?

Well, yes and no.

The subjects were familiar: an introduction to electronic mail, what you need to get started, why electronic mail is better than the USPS, etc. But there was something different. Computer and electronic transmission concepts were explained in greater depth than usually is found in this genre. Yet, I couldn't help but notice that there was none of the academic stiffness that so frequently is found in mass-market books dealing with technical subjects. Everything was easy to read and, more important, easy to understand.

It was then that I looked over the biographical blurbs on the authors. I had my answer. This collaboration of a professional writer and a well-qualified technical expert has resulted in a book that does indeed separate itself from most others of its ilk.

In addition to the basics, *Networking* will provide you with a broad range of information on the overall subject of telecommunications. Such topics as local area networks (LANS), audiotex, facsimile (FAX), and videotex are discussed right along with other less technical aspects of telecommunications. Separate discussions of such non-technical subjects as telecommuting (working from home with the help of a computer) and the future of electronic communication provide a nice balance.

Although the primary focus of *Networking* is electronic mail, the authors have carried the topic out to logical extensions, such as slow-scan video teleconferencing and the integration of computer communications into a business environment.

While there may not be anything new or innovative revealed in *Networking*, you will find it to be a thorough and eminently readable book on an overworked subject.

William J. Lynott is president of W.J. Lynott Associates, a management consulting firm in suburban Philadelphia. His CompuServe User ID number is 70007,420.

Super Disk™ Diskettes

Now...Diskettes you can swear by, not swear at.

Lucky for you, the diskette buyer, there are many diskette brands to choose from. Some brands are good, some not as good, and some you wouldn't think of trusting with even one byte of your valuable data. Sadly, some manufacturers have put their profit motive ahead of creating quality products. This has resulted in an abundance of low quality but rather expensive diskettes in the marketplace.

A NEW COMPANY WAS NEEDED AND STARTED

Fortunately, other people in the diskette industry recognized that making ultra-high quality diskettes required the *best* and newest manufacturing equipment as well as the best people to operate this equipment. Since most manufacturers seemed satisfied to give you only the everyday quality now available, an assemblage of quality conscious individuals decided to start a new company to give you a new and better diskette. They called this product the *Super Disk* diskette, and you're going to love them. Now you have a product you can swear by, not swear at.

HOW THEY MADE THE BEST DISKETTES EVEN BETTER

The management of *Super Disk* diskettes then hired all the top brains in the diskette industry to make the *Super Disk* product. Then these top bananas (sometimes called floppy freaks) created a new standard of diskette quality and reliability. To learn the "manufacturing secrets" of the top diskette makers, they've also hired the remaining "magnetic media moguls" from competitors around the world. Then all these world class, top-dollar engineers, physicists, research scientists and production experts (if they've missed you, send in your resume to *Super Disk*) were given one directive...to pool all their manufacturing know-how and create a new, better diskette.

HOW SUPER DISK DISKETTES ARE MANUFACTURED

The *Super Disk* crew then assembled the newest, totally quality monitored, automated production line in the industry. Since the manufacturing equipment at *Super Disk* is new, it's easy for *Super Disk* to consistently make better diskettes. You can always be assured of ultra-tight tolerances and superb dependability when you use *Super Disk* diskettes. If all this manufacturing mumbo-jumbo doesn't impress you, we're sure that at least one of these other benefits from using *Super Disk* diskettes will:

1. **TOTAL SURFACE TESTING** - For maximum reliability, and to lessen the likelihood of disk errors, all diskettes must be totally surface tested. At *Super Disk*, each diskette is 100% surface tested. *Super Disk* is so picky in their testing, they even test the tracks that are in between the regular tracks.
2. **COMPLETE LINE OF PRODUCTS** - For a diskette to be useful to you and your computer, it must be compatable physically. *Super Disk* has an entire line of 5¼-inch and 3½-inch diskettes for your computer.
3. **SPECIALLY LUBRICATED DISK** - *Super Disk* uses a special oxide lubricant which is added to the base media in the production of their diskettes. This gives you a better disk drive head to media contact and longer head and disk life.
4. **HIGH TEMPERATURE/LOW-MARRING JACKET** - A unique high temperature and low-marring vinyl jacket allows use of their product where other diskettes won't work. This special jacket is more rigid than other diskettes and helps eliminate dust on the jacket.
5. **REINFORCED HUB RINGS** - Standard on all 48 TPI *Super Disk* mini-disks, to strengthen the center hub hole. This increases the life of the disk to save you money and increase overall diskette reliability.
6. **DISK DURABILITY** - *Super Disk* diskettes will beat all industry standards for reliability since they will give you more than 75% of the original signal amplitude remaining even after an average (Weibul B-50) of 30 million passes. They are compatible with all industry specifications as established by ANSI, ECMA, ISO, IBM and JIS.
7. **CUSTOMER ORIENTED PACKAGING** - All *Super Disk* disks are packaged 10 disks to a carton and 10 cartons to a case. The economy bulk pack is packaged 100 disks to a case without envelopes or labels.
8. **LIFETIME WARRANTY** - If all else fails, remember, all disks made by *Super Disk* Inc., have a lifetime warranty. If any *Super Disk* diskette fails to meet factory specifications, *Super Disk* Inc. will replace them under the terms of the *Super Disk* warranty.
9. **SUPERB VALUE** - With Super Disk's automated production line, high-quality, error-free disks are yours without the high cost.

Order toll free 800-USA-DISK

NOW...NAME BRAND QUALITY AT SUPER CE PRICES

Now, you can buy Super Disk brand diskettes directly from Communications Electronics at prices less than "unbranded" generic diskettes. Your data is valuable, so why take chances using a diskette that could be so unreliable that the manufacturer refuses to put their name on it. To save you even more, we also offer Super Disk bulk product where 100 diskettes are packed in the same box without envelopes or labels. Since we save packaging costs, these savings are passed on to you. Diskette envelopes are also available from us. These super strong and tear resistant envelopes are only $10.00 per pack of 100. Use order # CV-5 for a 100 pack of 5¼" diskette envelopes.

39¢ per disk Quantity One

Our diskettes are packed 10 disks to a carton and 10 cartons to a case. The economy bulk pack is packaged 100 disks to a case without envelopes or labels. For best value, you should order in increments of 100 diskettes. Almost all diskettes are immediately available from Super Disk. With our efficient warehouse facilities, your order is normally shipped in less than a day.

SAVE ON SUPER DISK™ DISKETTES Product Description	Part #	Super Disk price per disc ($)
5¼" SSSD Soft Sector w/Hub Ring	**6431-CA**	0.54
5¼" Same as above, but bulk pack w/o envelope	**6437-CA**	0.39
5¼" SSDD Soft Sector w/Hub Ring	**6481-CA**	0.58
5¼" Same as above, but bulk pack w/o envelope	**6487-CA**	0.43
5¼" DSDD Soft Sector w/Hub Ring	**6491-CA**	0.64
5¼" Same as above, but bulk pack w/o envelope	**6497-CA**	0.49
5¼" DSQD Soft Sector (96 TPI)	**6501-CA**	0.99
5¼" Same as above, but bulk pack w/o envelope	**6507-CA**	0.84
5¼" DSHD for IBM PC/AT - bulk pack	**6667-CA**	2.07
3½" SSDD (135 TPI) - bulk pack	**6317-CA**	1.67
3½" DSDD (135 TPI) - bulk pack	**6327-CA**	1.99

SSSD = Single Sided Single Density; SSDD = Single Sided Double Density; DSDD = Double Sided Double Density; DSQD = Double Sided Quad Density. DSHD = Double Sided High Density; TPI = Tracks per inch.

BUY YOUR DISKETTES FROM CE WITH CONFIDENCE

To get the fastest delivery of your diskettes, phone your order directly to our order desk and charge it to your credit card. Written purchase orders are accepted from approved government agencies and most well rated firms at a 10% surcharge for net 10 billing. For maximum savings, your order should be prepaid. All sales are subject to availability, acceptance and verification. All sales are final. All prices are in U.S. dollars. Prices, terms and specifications are subject to change without notice. Out of stock items may be placed on backorder or substituted for equivalent product unless we are instructed differently. A $5.00 additional handling fee will be charged for all orders with a merchandise total under $50.00. All shipments are F.O.B. CE warehouse in Ann Arbor, Michigan. COD terms are available, in U.S. UPS areas for $5.00 extra, and are payable with cash or certified check. Michigan residents add 4% sales tax.

For **shipping charges** add $6.00 per 100 diskettes and/or any fraction of 100 5¼-inch or 3½-inch diskettes for U.P.S. ground shipping and handling in the continental U.S. For 1,000 or more disks shipped to the continental U.S., shipping charges are $4.00 per hundred diskettes. UPS 2nd day air rates are *three* times continental U.S. rates. For Canada, Puerto Rico, Hawaii, Alaska, or APO/FPO delivery, shipping is *three* times the continental U.S. rate.

Mail orders to: Communications Electronics Inc., Box 1045, Ann Arbor, Michigan 48106-1045 U.S.A. If you have a Visa or Master Card, you may call and place a credit card order. Order toll-free in the U.S. Dial 800-USA-DISK. In Canada, order toll-free by calling 800-CA1-DISK. If you are outside the U.S. or in Michigan dial 313-973-8888. Telex anytime 810-223-2422. Order your Super Disk diskettes now.

Copyright © 1986 Communications Electronics Inc. Ad #030186-CA

Now 39¢ a disk

Connections:
Telecommunications on a Budget

By Robert Chapman Wood
Scott, Foresman and Co., 1985
256 pages, $15.95 (softcover)
Reviewed by William J. Lynott

There are books on how to see Europe cheaply, how to save money on life insurance and how to save on your taxes. So, why not a book on how to enjoy the benefits of telecommunications without dropping a bundle? That's the purpose of *Connections*, and it does a good job.

Telecommunications is informative, lots of fun and can be an important source of business and professional information. But it also can be the source of a lot of expense. Choosing and using hardware, software and online services for telecommunications involves what amounts to a considerable investment for most people. *Connections* should help keep online expenses to a minimum, not only for beginners but also for some experienced computer users.

The author has a chatty style that suits the content of this book quite nicely. A tad of wry humor here and there and an occasional shot at some of the products and services available in the world of online communications help lend credibility to Wood's efforts.

Chapter 1 begins where it should — with what you need to get started. In chapters 2 and 3, you get a rundown on how online services work and how to understand what is happening.

Much of the early chapters is devoted to local bulletin boards and other free services; later on, individual commercial services and databases are discussed. Throughout, the emphasis is on how to gain maximum benefit from your online escapades without going broke in the process.

In his somewhat irreverent treatment of the major commercial services such as CompuServe, The Source and Dow Jones News/Retrieval, Wood provides a number of techniques and insights to help you get what you need quickly at the least possible expense.

Chapter 5 alone will be worth the cost of this book to some readers. It is devoted to communications costs — telephone expense. Once your hardware and software are in place, telephone bills that can make you a hero with Ma Bell are a distinct possibility. Wood offers practical tips on keeping this expense in line with your budget. In this chapter, you also will learn of some of the pros and cons as well as pitfalls you may encounter in the use of some of the discount services and commercial networks.

Appendices include a listing of some free bulletin boards, users' groups and basic information about online utilities. Also included at the end of the book are discount coupons for Delphi, Knowledge Index, EasyNet, CompuServe and the Unison System.

William J. Lynott is president of W.J. Lynott Associates, a management consulting firm in suburban Philadelphia. His CompuServe User ID number is 70007,420.

Computer Entrepreneur

By R. H. Morrison
Computer Information, 1985
912 pages, $29.95 (softcover)
Reviewed by Cathryn Conroy

Oh no, I groaned, as I unpacked the latest shipment of books from the UPS man. Another "how to get rich with your computer" book. I suppose it was the sheer weight of it (a hefty five pounds!) that kept me from immediately tossing *Computer Entrepreneur* into the discard pile. I'm glad I took a closer look.

Although there is no denying that *Computer Entrepreneur* is a book on how to use your computer to make money, it is different from the usual book in this over-published category. R. H. Morrison has assembled some 100 creative, even unique business ideas — ranging from computerized dating services to computerized map sales to a restaurant pricing service — into a format that is easy to read and follow.

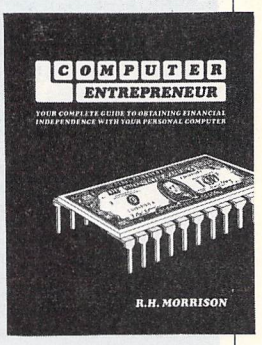
The first section is a test of readers' interests, to guide them toward those business ideas that will most likely pique their imaginations.

The second section is a quick-and-dirty description of 100 computer businesses, including such information as income level, marketing methods, equipment required, available part-time or full-time work, market base needed and necessary start-up capital. If an idea sounds interesting, you are directed to the third section of the book in which Morrison has done the preliminary work of scoping out the business. The information is detailed and reads much like an informal business plan. If nothing else, it will either light a fire of inspiration or make you realize this is not the business for you — with an investment of only a few minutes of your time.

Section 4 gets serious, presenting a business structure and plan, and running through those tedious but critical areas of permits, licenses, bookkeeping, taxes and legal plans. The information is not complete, but it is a good beginning. Obviously, before starting a business, you'll want to seek the advice of experts, such as an attorney and accountant, but this section will clue you in as to the right questions to ask, making the time you spend with those experts really pay off.

Section 6 provides some sources for obtaining capital as well as tips on handling the banks and protecting your interests.

The final section lists various software products that would be useful in the suggested businesses. Included are the manufacturer's name, address and phone number.



Computer Entrepreneur will help you avoid critical, costly mistakes common in the start-up phases of many businesses.

Becoming an entrepreneur is exciting. However, the thrill of owning a business can sometimes get in the way of good business sense. *Computer Entrepreneur* will help you avoid critical, costly mistakes common in the start-up phases of many businesses.

Cathryn Conroy is a contributing editor of Online Today. *Her CompuServe User ID number is 70007,417.*

Talk to Us

Online Today has a Feedback area in the *Electronic Edition*. Simply GO OLT-33 from any prompt in the CompuServe Information Service.

ONLINE TODAY

SMITH ADVERTISING SPECIALTIES, INC.

"SMITTY'S BIZZY BEES"

FOR ALL YOUR BUSINESS NEEDS

• Employee Recognition Programs • Meeting Coordinating
• Travel Incentives • Award & Presentation Banquets • Fund Raisers
• Merchandise Licensing

ADVERTISING PREMIUMS

Tee Shirts, Frisbees, Golf Balls, Pens, Key Rings, Luggage Tags, ID Cards, Name Plates, Tote Bags, Calculators, Ice Scrapers, Mugs, Ash Trays, Shopping Bags, Diaries, Matches, Umbrellas, Bumper Stickers, Hats, Beach Towels, Memo Pads, Rulers, Slide Guides, Plants, Folders, Desk Caddies, Placemats, Cocktail Napkins, First Aid Kits, Trophies, Balloons, Jogging & Sport Apparel

THIS IS ONLY A SAMPLE OF ITEMS WE CARRY AND SERVICES AVAILABLE

Call us—Our prices are reasonable and we guarantee on-time delivery or your money refunded!

SMITH ADVERTISING SPECIALTIES, INC.

NEW YORK STATE • **516-485-6236**
OUTSIDE NEW YORK • **800-258-0012**

Smith Advertising has a special offer available to the owners/ operators of printing and graphic shops—Now, your shop will be able to offer advertising premiums to your customers at a reasonable cost. You choose the items that you want to feature or carry. There are no minimum quantities, no minimum orders. Smith Advertising handles the ordering and shipping pre-paid to your store for your customer. Now your business can offer advertising premiums without the additional expense. This package is available on a contract basis to owners/operators only.

ATTENTION:
PC USERS SEE US ON THE ELECTRONIC MALL AT THE PROMPT! GO CT...

GO EBB or circle 23 on the Reader Service Form.

CALL TOLL FREE 1-800-382-2242

NORTHEASTERN Software

7 Trap Falls Rd. Shelton, Connecticut 06484

(See Below) WE WILL BEAT

- Tap our unmatched selection and inventory of software/hardware for the IBM PC and Commodore Amiga (as well as the Mac and Apple).
- School and corporate purchase orders are welcomed. CALL 1-800-874-1108.
- Special/rush orders. If something you need is not listed, hard to find, or needed in a hurry, CALL 1-800-874-1108.
- Order Status. CALL (203) 375-3860.
- Ask for System Sales when ordering a complete system.
- FREQUENT PURCHASER PROGRAM. Any repeat customer will automatically receive $1 off any order he or she places with us. Please mention to your operator that you are a repeat customer. We value your continuing business. Send in $1,000 worth of invoices (representing previous purchases) and you will receive a coupon worth 1% off any future purchase. With $5,000 worth of invoices, receive a coupon worth 5% off any future purchase.
- No additional charges for credit card orders.
- Convenient hours. 7 days/week: 9AM–11 PM EST.
- FREE AIR EXPRESS SHIPPING. Purchase $150 or more of software and for no additional charge we will ship your products by air courier. Mention this to your operator as you place your order.
- FURTHER DISCOUNTS BY MAIL. Circle the items in our ad you want, send the aid in with the coupon below and receive $ .50 off each item! Cut out a competitor's ad with a lower price and we will give you $1 off his price (subject to the conditions below).

Send coupon and list of items desired to:
DISCOUNT BY MAIL DEPARTMENT
Northeastern Software, 88 Ryders Lane, Stratford, CT 06497

To be eligible for the $1.00 per item discount you must:
1. Fill out all items. 2. Send in our ad with the items you desire circled.

Name_____

Address_____
(Include Company Name)

City_____ State_____ Zip_____

Phone No. at above address_____

Check form of payment
Visa MasterCard C.O.D. Personal Check
Certified Check Money Order

Card No._____ Exp. Date_____

Computer Model _____

Personal and company checks allow 3 weeks to clear. For faster delivery, send cashier's check, certified check, or money order. Shipping—Software ($3.00 minimum). Shipping—Hardware (please call 203-375-3860). COD—Add an addition $2.00. Alaska, Hawaii, Canada, PO, APO, and FPO $5.00 minumum. Foreign orders—$15.00 minimum and 15% of all orders over $100. Mastercard and Visa (please include card no. and expiration date). Connecticut residents add 7.5% sales tax. Prices subject to change without notice. All returns must have a return authorization number. Call 203-375-3860 to obtain one before returning goods for replacement. Defective merchandise replaced with same item only. We do not guarantee compatibility. All sales are final. "Comparable advertised price" does not include typographical errors on the part of other vendors or prices that do not reflect higher shipping costs, credit card charges, or membership fees. The $1 off offer only applies to items where Northeastern's price is not already the lowest. Final judgment remains with the manager on duty.

SPECIALS

ARCHIVE
60MB Cart Backup (Internal) 695.00
60MB Cart Backup (External) 750.00
AST Six Pack Plus 384K W/Sidekick 235.00
Centerpoint Copy II PC 17.50
IBM PC/XT/AT (All Configurations) .... CALL
NEC Multisync 520.00

ACCESSORIES

CURTIS
PC Pedestal II 29.00
Flip N File 50 ..... 11.00
KENSINGTON
Universal Printer Stand 15.00
KEYTRONICS
KB-5150 ..... 113.00
KB-5151 PC JR 164.00
KB-5151 Deluxe Keyboard 164.00
KB-5153 Keyboard W/Touch Tabl .. 279.00
PERFECT DATA
Head Cleaning Kit 8.00

BLANK MEDIA

BASF DS/DD 11.50
Elephant DS/DD 13.00
Fuji DS/HD 27.00
Maxell DS/DD 16.00
Maxell DS/QD (For AT) 27.00
Verbatim DS/DD 16.75
Verbatim DS/HD 40.00
Sony DS/DD 13.00
Sony DS/QD 40.00

SURGE PROTECTORS

CURTIS
Diamond Surge Suppressor 24.00
Ruby Surge Suppressor 43.00
Emerald Surge Suppressor 30.00
Sapphire Surge Suppressor 43.00
DATASHIELD
PC-200 Power Backup 225.00
XT-300 Power Backup 335.00
AT-500 Power Backup 515.00
AT-800 Power Backup 595.00
KENSINGTON
Masterpiece 83.00
Masterpiece Plus 111.00
STEDIWATT
4 Outlets 35.00
6 Outlets 40.00
8 Outlets 45.00

PRINTERS

BROTHER
HR 15 XL 328.00
HR 15 Tractor 95.00
HR 25 ..... 455.00
HR 25/35 Tractor 114.00
HR 35 ..... 660.00
Twinwriter 5 ..... 835.00
CITIZENS
MSP-15 (160 CPS) 360.00
MSP-20 (200 CPS) 330.00
MSP-25 (200 CPS) 500.00
PREMIERE 35
DIABLO
Advantages D-25 ..... 595.00
DYNAX/FORTIS
D4-45 Dual Head Printer 835.00
DX-15 ..... 375.00
EPSON
All Epson Printers ..... CALL
IBM
Quietwriter II ..... CALL
IBM Proprinter ..... CALL
JUKI
6100 (15 CPS) 332.00
6200 (30 CPS) 505.00
6300 (40 CPS) 645.00
MANNESMAN TALLY
MT-85 ..... CALL
NEC
Spinwriter Elf 350 ..... 370.00
Spinwriter 2030 or 2050 (20 CP) . 610.00
Spinwriter 3530 or 3550 (35 CP) . 955.00
Spinwriter 8850 (55 CPS) 1265.00
2000/3500/8800 Tractor 190.00
P5 Pinwriter (Parallell) 920.00
OKIDATA
All Okidata's ..... CALL
PANASONIC
KXP-1091 ..... 235.00
KXP-3151 ..... 370.00
QUME
Spring 11/40 40 CPS LQ ..... CALL
SILVER REED
EXP 400P 185.00
EXP 500P 235.00
EXP 550P 360.00
EXP 800P 655.00
STAR MICRONICS
SG-10 (120 CPS) 213.00
SG-15 (120 CPS) 369.00
SD-10 (160 CPS) 329.00
SD-15 (160 CPS) 439.00
SR-10 (200 CPS) 479.00
SR-15 (200 CPS) 579.00
TOSHIBA
1340 PAR. or SER. 385.00
321 PAR 515.00
341 PAR Only 745.00
351 PAR Only 1015.00

MODEMS

ANCHOR AUTOMATION
Signalman Express 1200 ..... 225.00
Signalman Lightning 2400 ..... 340.00
Volksmodem 1200 ..... 166.00
AST
AST Reach Internal 1200 ..... 310.00
HAYES
Chronograph 165.00
Smartcom II 84.00
Smartmodem 300 (External) 127.00
Smartmodem 1200 (External) 350.00
Smartmodem 1200B (Internal) 310.00
Smartmodem 1200B (Internal W/Software) 329.00
Smartmodem 2400 (External) 560.00
Smartmodem 2400B W/Software .. 530.00
Hayes Transet 1000 ..... 260.00
NOVATION
Smartcat Plus 1200 Standalone ... 305.00
2400 Standalone Modem W/Software 527.00
2400 Standalone Modem 465.00
Half-Card 2400 W/Software 465.00
Half-Card 2400 Hardware Only 417.00
PROMETHEUS
Promodem 1200 ..... 265.00
Promodem 1200B Hardware Only .. 180.00
Promodem 1200B W/Software 205.00
US ROBOTICS
Password 1200 Baud 197.00
Courier 2400 Baud 385.00
VENTEL
2400 Half-Card W/Crosstalk XVI ... 445.00
1200 Plus External 300/1200 .... 305.00
PC Modem 1200 W/Crosstalk XVI .. 305.00
PC Modem 1/2 Card W/XTalk 335.00
200M TELEPHONICS
PC 1200 W/Software 249.00
PC 1200 Hardware Only 222.00

DRIVES

ARCHIVE
60MB Cartridge Backup (Internal) .. 795.00
60MB Cartridge Backup (External) . 995.00
CORE INTERNATIONAL
20MB AT Plus 1250.00
30MB AT Plus 1550.00
60MB Cartridge Backup (Internal) . 1450.00
EVEREX
20MB Cassette Backup 575.00
20MB Cassette Backup 625.00
60MB Cartridge Backup (Internal) .. 835.00
60MB Cartridge Backup (External) . 975.00
100MB Cartridge Backup (External) . 995.00
IOMEGA
Bernoulli Box 10MB W/CNTRL 1735.00
Bernoulli Box 10MB Plus W/CNTR . 1850.00
Bernoulli Box 2-10MB W/CNTRL .. 2305.00
Bernoulli Box 2-10MB Plus W/CN . 2435.00
Bernoulli Box 2-20MB W/CNTRL .. 3140.00
IRWIN MAGNETICS
20MB Cartridge Backup (Internal) .. 595.00
20MB Cartridge Backup (External) . 805.00
MAXTOR
140MB Hard Drive for AT (Internal) 3400.00
MOUNTAIN COMPUTER
10MB Drivecard or Zong ..... CALL
PRIAM
60MB for XT (Internal) 1450.00
60MB for AT (Internal) 1350.00
RACORE
Drive Two for PC JR. 355.00
Expansion Board for PC JR. W/1 ... 145.00
SEAGATE
30MB Full Height for AT INT 695.00
40MB Full Height for AT EXT 795.00
MPI
360KB Full Height 90.00
TALLGRASS
60MB Cartridge Backup (Ext) 1335.00
Interface Card for TG 20/21/22 ... 132.00
THESIS
Fast File (5MB RAM Disk) 1895.00
WANGTEK
60MB Cartridge Backup (Internal) .. 875.00

BACK-UP / COPY SOFTWARE

CENTRAL POINT
Copy II PC 17.50
Copy II PC Option Board 71.50
MERIDIAN
Carbon Copy (2 Req.) 128.00
QUAID
Copywrite 37.00
FIFTH GENERATION SOFTWARE
Fastback 90.00
TRANSEC
Transec Module A, B and C 30.00

CHIPS

INTEL
Intel 8087-3 Math Co-Processor ... 106.00
Intel 8087-2 Math Co-Processor ... 147.00
Intel 80287 Math Co-Processor 175.00
MAJOR BRAND CHIPS
Set of 64k 150ns 9.50
Set of 256k 150ns 23.50

DESKTOP / UTILITY SOFTWARE

ALPHA
Electric Desk PC 175.00
Keyworks 46.00
BOURBAKI
1 DIR 45.50
BORLAND
Sidekick 27.50
Sidekick Non-Protected 42.50
Superkey 34.00
Traveling Sidekick 39.50
CENTRAL POINT
PC Tools 17.50
DIGITAL RESEARCH
GEM Collection 106.00
GEM Graph 132.00
GEM Draw 132.00
GEM Wordchart 105.00
GEM Desktop 26.50
GEM Draw W/Desktop 137.00
ELECTRONIC ARTS
Get Organized! 63.00
EXECUTIVE SYSTEMS
X Tree 27.00
GOLDEN BOW
V Feature Deluxe ..... CALL
MICROSOFT
Windows 56.75
PETER NORTON
Norton Utilities 3.1 ..... 47.00
QUARTERDECK SOFTWARE
DESQVIEW 60.00
ROSE SOFT
Pro Key 68.00
SOFT LOGIC
Disk Optimizer ..... CALL
STARBRIDGE TECHNOLOGY
Starbridge DOS 28.00
WARNER
Desk Organizer 55.50

ACCOUNTING PACKAGES

BPI
Business Builder 395.00
General Acc./AR/AP or Payroll 278.00
Job Costing 375.00
Inventory Control 375.00
CHANG LABS
Rags to Riches Series 59.00
EVERGREEN SOFTWARE
One-Write Plus 139.50
ACCOUNTING PROGRAMS EACH
GREAT PLAINS
Business Programs 450.00
OPEN SYSTEMS
Accounting Software ..... CALL
RESOURCE MGT. I
PEACHTREE
Back to Basics 182.00
Peachtree GL/AP/AR 235.00
SIERRA ON LINE
Homeword 47.00
Homeword Speller 37.00
SORCIM
Easy Plus System 77.00
AR/AP/GL 281.00
STATE OF THE ART
AR/AP/GL/INV 319.00
UNITED SOFTWARE
In House Accountant 100.00

DATABASE SOFTWARE

ALPHA SOFTWARE
Database Manager II 150.50
ASHTON TATE
D Base II 263.00
D Base III Plus 365.00
BORLAND
Reflex 50.00
FOX & GELLER
Quick Code III 137.00
Quick Index III (Protected) 72.00
Quick Report III 137.00
D Graph III 137.00
Dutil III Plus 74.00
INFOCOM
Cornerstone ..... CALL
INNOVATIVE SOFTWARE
Smart Software System 395.00
Smart Spelling Checker 78.00
MICRO DATA BASE SYSTEMS
Knowledgeman II/2 ..... 245.00
Knowledgeman Upgrade Kit 142.00
MICRORIM
Clout 2.0 ..... 116.00
Extended Report Writer 74.00
RBase 5000 ..... 318.00
NANTUCKET
Clipper 334.00
POWERBASE SYSTEMS
Powerbase 165.00
SOFTWARE PUBLISHING
PFS: File 75.00
PFS: Report 66.00
STONEWARE
Advanced DB Master 265.00
TIMEWORKS
Data Base Manager II 76.50

GRAPHICS PACKAGES

APPLIED SOFTWARE TECHNOLOGY
Versaform XL 49.50
BPS
Business Graphs 212.00
Overhead Express 99.50
BRIGHTBILL ROBERTS
Graphics Partner 49.50
BRODERBUND
Print Shop 35.00
Graphics Library I 24.00
CONNECTICUT SOFTWARE
Printer Boss 79.00
Sideline 35.00
DATA TRANSFORMS
Fontrix 75.00
Fontpacks 1-11 ..... 13.00
DECISION RESOURCES
Chartmaster 195.00
Diagrammaster 185.00
Signmaster 130.00
MAP MASTER
DIGITAL RESEARCH
DR Draw 155.00
DR Graph 155.00
DR Logo 80.00
ENERTRONICS
Energraphics 155.00
Energraphics W/Plotter Option 200.00
Enercharts 155.00
GCI
Graphwriter Combo Pack 281.50
Free Lance 187.00
MICROGRAPHX
PC Draw 197.50

Connecticut Orders Call (203) 929-8522 IN CANADA 1-800-843-0074

ASTERN

ANY COMPARABLE ADVERTISED PRICE BY $1

MICROSOFT
Chart 165.00
PC SOFTWARE
Executive Picture Show 135.00
SOFTCRAFT
Fancy Fonts 135.00
SOFTSTYLE
Printworks 33.50
Printworks Laser 64.00
Set FX 39.00
SOFTWARE PUBLISHING
PFS: Graph 74.50
SPECTRUM HOLOBYTE
Art Studio 25.00
SPRINGBOARD
Newsroom 32.00
Clip Art Vol 1 16.00
Clip Art Vol 2 21.00
T MAKER
Clickart Publisher 105.00
Laser Option 85.00
UNISON WORLD INC.
Print Master 31.00
Art Gallery I 20.00

GRAPHICS TABLETS AND MICE

IMSI
DR Halo II 80.00
PC Paintbrush Plus 37.00
Logitech Mouse W/DR Halo II 104.00
PC Mouse W/DR Halo II 117.00
KOALA
Executive Presentation Kit 84.00
Speed Key Controller Card 30.00
Speed Key Tablet W/Software 112.00
Koala Pad 85.00
MICROSOFT
Mouse (Bus) 106.00
Mouse (Serial) 119.00
MOUSE SYSTEMS
PC Paint 64.00
PC Mouse W/Paint + 115.00
PC Mouse W/Ready 107.00
PC Mouse W/Ready + Paint + 132.00
HAYES, CH
Mach II Joystick 24.50
Mach III Joystick 31.00
Game Port Card for IBM 32.50
KRAFT
Two Button Joystick 16.00
Three Button Joystick 32.00
Exec Cursor Con W/Joystick 45.00
IMSI
Mouse Sys. Mouse W/Dr. Halo II 105.00
Logi Mouse W/Dr. Halo II 104.00
IMSI Mouse W/Dr. Halo 105.00

HOME FINANCE PACKAGES

BATTERIES INCLUDED
Electronic Checkbook 38.00
CBS
Stockpak II 45.00
CONTINENTAL SOFTWARE
Home Accountant Plus 75.50
Tax Advantage 85 34.00
DOW JONES
Market Analyzer 195.00
Market Manager 137.00
Sales & Prospect Organizer 218.00
Spreadsheet Link 137.00
HOWARDSOFT
Tax Preparer 175.00
Real Estate Analyzer III 208.00
MECA
Managing Your Money 94.00
Managing The Market 77.00
MONOGRAM
Dollars & Sense W/Forecast 93.00
SCARBOROUGH
Net Worth 57.00
SIMON AND SCHUSTER
JK Lassers Money Manager 53.00
JK Lassers Tax Program 43.00
TIMEWORKS
Silvia Porters Fin Planner 83.00
TURNING POINT
Time is Money 66.00

INTEGRATED SOFTWARE

ASHTON TATE
Framework II 360.00
TIME FRAME
Frame Lock 22.00
LOTUS DEVELOPMENT
123 299.00
REPORTWRITER 123
Symphony 410.00
SOFTWARE GROUP
Enable 330.00
SOFTWARE PRODUCTS
Open Access 372.00
SOFTWARE PUBLISHING
PFS: First Success 185.00
XANARO
Ability 255.00

PROGRAMMING LANGUAGES

ADDISON WESLEY
True Basic 82.50
BORLAND
Turbo Pascal W/8087 55.00
Turbo Pascal W/BCD 55.00
Turbo Pascal W/8087, BCD 62.50
Turbo Pascal 35.00
Turbo Lightning 50.00
Turbo Gameworks 33.00
Turbo Graphics Toolbox 28.00
Turbo Database Toolbox 28.00
Turbo Editor Toolbox 33.00
Turbo Tutor 17.50
Turbo New Pack 48.00
Turbo Prolog 61.00
Turbo Jumbo Pack 135.00
DIGITAL RESEARCH
CPM/86 33.00
HARVARD ASSOCIATES
PC Logo 2.0 87.00
LIFEBOAT
Lattice C Compiler 235.00
Run C Interpreter 77.00
C Food Smorgasboard 77.00
Panel 145.00
Lattice Windows 145.00
Multi Halo Lattice 123.00
MICROSOFT
Quick Basic Compiler 58.00
Basic Compiler 225.00
Basic Interpreter 195.00
Business Basic Compiler 249.50
C Compiler 223.00
Cobol Compiler 395.00
Fortran Compiler 198.00
Macro Assembler 85.00
Pascal Compiler 173.00
SUMMIT SOFTWARE
Better Basic 118.00
Btrieve Interface or Math Mod 63.00
Run Time 150.00

PROJECT MANAGEMENT SOFTWARE

BREAKTHROUGH SOFTWARE
Timeline 205.00
HARVARD SOFTWARE
Total Project Manager 255.00
LIVING VIDEOTEXT
Ready 48.00
Thinktank 2.0 91.00
MICROSOFT
Project 227.00
SORCIM
Superproject Plus 182.00

SPREADSHEET SOFTWARE

CONSUMER SOFTWARE
Spreadsheet Auditor 75.00
FUNK SOFTWARE
Sideways 33.00
GNP DEVELOPMENT
CPA+ 325.00
MACRO+ 24.00
Password+ 23.00
Recalc+ 47.00
MICROSOFT
Multiplan 111.00
PAPERBACK SOFTWARE
VP Planner 54.00
PALADIN
Flash Calc 53.00
SOFTWARE PUBLISHING
PFS: Plan 74.50
SORCIM
Supercalc III 185.00
TIMEWORKS
Swift Calc W/Sideways 95.00

WORD PROCESSING SOFTWARE

BRODERBUND SOFTWARE
Bank Street Writer 45.00
HAYDEN
The Writer 25.00
LEADING EDGE
Nutshell or Word Processor 48.00
Word Processor W/Mail Merge & Spell 100.00
LIFETREE SOFTWARE
Color Magic 20.00
Volkswriter Deluxe III 140.00
Volkswriter Scientific 0.00
MICROPRO
Easy 91.00
Wordstar 161.00
Wordstar 2000 233.00
Wordstar 2000+277.50
Wordstar Professional+233.50
MICROSOFT
Word 227.00
MULTIMATE INTERNATIONAL
On File 85.00
Just Write 51.00
Multimate 200.00
Multimate Advantage 243.00
Multimate Executive 277.00
SAMNA
Word III 250.00
SATELLITE SOFTWARE
Word Perfect 196.50
SIMON AND SCHUSTER
Websters Spelling Checker 33.00
SOFTWARE PUBLISHING
PFS: Proof 51.00
PFS: Write 74.00
SORCIM
Easywriter II 186.00
WRITING CONSULTANT
Word Finder CALL

EDUCATIONAL SOFTWARE

ATI
Skill Builder Programs 24.00
Training Power Programs 43.00
BARRONS
Computer SAT 50.00
BIBLE RESEARCH
The Word 1.0 (KJV or NIV) 145.00
CBS SOFTWARE
Goren's Bridge 39.00
Mastering the SAT 50.00
CDEX
All Programs 37.00
DLM
Alien Addition or Minus Mission 17.00
Bobbies Greatest Word Chase 15.00
Demolition Division 17.00
Meteor Multiplication 17.00
Spelling Whiz or Verb Viper 17.00
DAVIDSON AND ASSOCIATES
Math Blaster 24.00
Speed Reader II 35.00
Spell It or Word Attack 24.00
DESIGNWARE
Body Transparent or Grammar Examiner 23.00
European Nations and Locations 23.00
Math Maze or Spellagraph 20.00
DIGITAL RESEARCH
DR. Logo 80.00
EDUWARE
Algebra I, II or III 20.00
HARCOURT BRACE JOVANOVICH
Computer SAT 45.00
HUMAN EDGE
Mind Prober 24.00
INDIVIDUAL SOFTWARE
Professor DOS or Professor Pixel 32.00
The Instructor II 26.00
Tutorial Set 52.00
Typing Instructor 26.00
LEARNING COMPANY
Magic Spells or Word Spinner 22.00
Number Stumper or Reader Rabbit 22.00
MECA
Basic Building Blocks 26.00
Jim Fixx 41.00
SCARBOROUGH
Build a Book About You 14.00
Mastertype 22.00
SCHOLASTIC
Agent USA or Turtle Tracks 21.00
SIMON AND SCHUSTER
Typing Tutor III 27.00
SPINNAKER
Alphabet Zoo 14.00
Kindercomp or Face Maker 12.00
Delta Drawing or in Search of 21.00
Amazon or Dragon World 23.00
Kidwriter or Story Machine 17.00
Snooper Troops 1 or 2 19.00
Trains 17.00
SPRINGBOARD
Music Maestro or Piece of Cake 19.00
Easy as ABC 21.00

GAMES

BLUECHIP
Baron or Millionaire 28.00
Squire or Tycoon 28.00
BRODERBUND
Ancient Art of War 25.00
Lode Runner 19.50
Print Shop 34.00
Graphics Library I 20.00
CBS Software
Felony or Murder by the Dozen 13.00
DATASOFT
Bruce Lee 21.00
Electronic Arts
Music Construction Set 26.00
One on One 26.00
Pinball Construction Set 21.00
HAYDEN
Holy Grail 27.50
Sargon III 27.50
INFOCOM
Suspended 26.00
Deadline or Starcross 27.00
Spellbreaker 27.00
Witness or Planetfall 22.00
Enchanter or Wishbringer 22.00
Cutthroats or Seastalker 22.00
Enchanter, Wishbringer or Witness 22.00
Hitchhiker's Guide 22.00
Sorcerer or Infidel 25.00
A Mind Forever Voyaging 25.00
Suspect 25.00
Zork I 22.00
Zork II or III 25.00
MICRO LEAGUE SPORTS
Micro League Baseball 22.50
General Managers Disk 22.50
Micro League 1985 Team Disk 11.50
MICROPROSE
F-15 Strike Eagle or Solo Flight 19.50
Hellcat Ace or Spitfire Ace 19.50
Silent Service 19.50
MICROSOFT
Flight Simulator (New Version) 28.00
Flight Sim Scenery Disks 13.00
MINDSCAPE
Rambo or Racter 27.00
Stephen Kings The Mist 25.00
James Bond A View to a Kill 25.00
ODESTA
Backgammon 29.00
Chess 7.0 39.00
ORIGIN SYSTEMS
Ultima III 35.00
PC SOFTWARE
Armchair Quarterback 21.00
Championship Blackjack 21.00
SCARBOROUGH
Boston Computer Diet 52.00
Songwriter 26.50
SEGA
Super Zaxxon 20.00
Tapper or Spy Hunter 25.00
SIERRA-ON-LINE
King's Quest I or II 27.00
SIMON AND SCHUSTER
N.Y. Times Crosswords 11.50
Star Trek 24.00
SIR-TECH
Wizardry I 34.00
SPECTRUM HOLOBYTE
Gato 20.00
STRATEGIC SIMULATIONS
Battle for Normandy 22.50
Tigers in the Snow 22.50
SUBLOGIC
Night Mission Pinball 24.00
Jet 30.00

MULTIFUNCTION BOARDS

AST
Six Pack Plus 64K W/Sidekick 215.00
Six Pack Plus 384K W/Sidekick 235.00
AST-Advantage Board 128K 369.00
AST-Advantage Pack OK 108.00
AST-I/O Plus II 117.00
EVEREX
Mini Magic 0-640K 1/2 Card 68.00
INTEL
Above Board CALL
Orchid Technologies
Conquest Multifunction W/OK 252.00
Eccell Multifuction at W/OK 383.00
PARADISE SYSTEMS
5-Pack Multifunction Card W/OK 93.00
PERSYST
Short Slot Memory Board W/384K 185.00
Mega Memory Board W/OK 229.00
PC/Monochrome Board 143.00
PC/Color Graphics Board 143.00
BOB Board 315.00
Mono Combo Board 285.00
QUADRAM
Expanded Quadboard W/OK 175.00
Expanded Quadboard W/384K 215.00
Silver Quadboard W/OK 193.00
Gold Quadboard W/OK 345.00
Quadmeg-AT W/128K 292.00
Quadport-AT Starter Kit 97.00
Liberty AT W/64K 255.00
STB
Grande Byte-AT W/128K 187.00
Quarter Byte W/256K 150.00
Big Byte Memory Board W/64K 114.00
Rio Plus II W/64K 167.00
Super Rio II W/64K 249.00
TECMAR
Captain Multifunction W/64K 167.00
Maestro Multifunction W/OK 310.00
Wave 64K 170.00
SIGMA DESIGNS
Maximizer W/OK 145.00
Sigma Expansion Chasis (9 Slot) 595.00

NETWORK CARDS

ORCHID
PCNET Blossom 64K 520.00
PCNET Starter Kit (2 Card) 725.00

ACCELERATOR BOARDS

ORCHID
PC Turbo-186 W/DB 256K 369.00
PC Turbo-186 W/8087 DB/256K 775.00
TITAN
Accellerator PC W/128K 460.00
MCT
Speed Demon PC 368.00
QUADRAM
Quadsprint 409.00

COMMUNICATION BOARDS

AST RESEARCH
AST-5251/11 575.00
AST-5251/12 475.00
DCA
Irma Board 785.00
Irmaline Remote 850.00
QUADRAM
Quadlink 309.00
TECMAR
Lab Master W/Options 675.00

VIDEO CONTROLLER CARDS

AST RESEARCH
AST-Preview 235.00
EVEREX
The Edge 263.00
Graphics Edge Display Card 267.00
HERCULES
Color Graphics Card 147.00
Monochrome Graphics Card 283.00
PARADISE SYSTEMS
Modular Graphics Card 230.00
Color Card 95.00
Monochrome Card 105.00
Multi Display Card 168.00
Module A 62.00
Module C 179.00
Clock W/64K Ram Module B 120.00
PERSYST
Mini Monochrome Board 116.00
BOB BOARD
Short Port Color Graphics Card 123.00
QUADRAM
EGA+ 360.00
QUADRAM
Quadcolor I 175.00
Quadvue Monochrome Card 223.00
SIGMA
Color 400 Card 412.00
STB
The Chauffeur 233.00
Ega Plus 290.00
Mono Plus With Parallel Port 137.00
Graphics Plus II 207.00
TECMAR
Graphics Master 427.00
VIDEO 7
Monochrome Graphics Adaptor 123.00
Monochrome Graphics Adaptor+ 160.00
Vega Board CALL

MONITORS

AMDEK
Video 310A Amber 140.00
Color 300 Composite 203.00
Color 600 HI-RES RGB 375.00
Color 710 Ultra HI-RES RGB 425.00
Color 722 RGB Enhanced Graphic 470.00
Tilt & Swivel 19.00
NEC
Multisync 520.00
PRINCETON
HX-9 HI-RES RGB Color 384.00
HX-12 HI-RES RGB Color 409.00
HX-12E HI-RES RGB Color 475.00
MAX-12E HI-RES Amber 147.00
SR-12 Super HI-RES Color 539.00
TAXAN
630 RGB Color 640 X 400 RES 429.00
640 RGB Color 720 X 400 RES 479.00

COMMUNICATIONS SOFTWARE

COMPUSERVE
Compuserve Starter Kit CALL
DELTA TECHNOLOGIES
Direct Access 33.50
HAYES
PLEASE 107.00
KENSINGTON
Easyline Mail Manager 90.00
MICROSOFT
Access 155.00
MICROSTUF
Crosstalk or Remote 92.00
Transporter 137.00
SOFTWARE PUBLISHING
PFS: Access 74.00
UNITED SOFTWARE
ASCII Express 107.00
VM
Relay Gold 133.00

GO EBB or circle 24 on the Reader Service Form.

Auto-Call Modems

Codex Corp. has introduced the Codex 2230 Series of new, integral auto-call modems.

Features include synchronous or asynchronous use, Hayes-compatible, stored number dialing, help menu and command prompts. The Codex 2233 sells for $445 and the Codex 2238 sells for $745.

For information, contact Codex Corp., 20 Cabot Blvd., Mansfield, MA 02048-1193; 617/364-2000.

GO EBB or circle 25 on the Reader Service Form.

Relay the Message

Penril DataComm has introduced Relay, a communications software program developed by VM Personal Computing for the IBM PC, PC-AT, PC-XT and close compatibles.

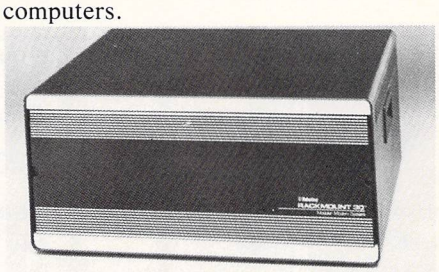
Relay provides error-free file transfer and can send and receive files simultaneously. Virtually any communication task can be automated with the program's script language. Relay is completely menu-driven and features numerous help screens. It also allows full-screen editing without having to switch to an external word processing program.

For information, contact Penril DataComm, 207 Perry Pkwy., Gaithersburg, MD 20877-2197; 800/638-8905 or 301/921-8600.

GO EBB or circle 26 on the Reader Service Form.

Modular Modem

The Rackmount 30 Modular Modem System from US Robotics Inc. provides complete dial-up 2400/1200/300 bps and asynchronous data communications for mainframe, mini and multi-user micro computers.



A fully configured Rackmount 30 system includes an industry-standard 19-inch rack chassis, 15 dual modem boards for a maximum of 30 modems, 15 dual interface boards, two power supply units, an AC power distribution board, a DC power distribution board and a protective front panel.

For information, contact US Robotics Inc., 8100 N. McCormick Blvd., Skokie, IL 60076.

GO EBB or circle 29 on the Reader Service Form.

Computerized Statistics

Statpac Gold from Walonick Associates is a statistical analysis software program that accommodates 500 variables and record sizes of 5,000 characters.

The program can be used as either a menu or command driven package. A text editor allows commands to be entered for both interactive and batch processing. The software is recommended for people with previous statistical analysis experience. Statpac Gold sells for $595 and is designed for a computer with a hard disk, medium- or high-resolution graphics board and at least 192K memory.

For information, contact Walonick Associates, 6500 Nicollet Ave. S., Minneapolis, MN 55423; 800/328-4907 or 612/866-9022.

GO EBB or circle 27 on the Reader Service Form.

Outline Processor

Kamasoft Inc. has introduced OutThink, an alternative for outline processing on CP/M computers.

The program allows users to classify text into a familiar outline structure and then alter the text based on that structure. Details can be hidden, while the user is focusing on the main ideas, as written material is developed and created. Levels of the outline can be collapsed off the screen, hiding them from view, and then expanded back into view for editing. Retail price is $49.95.

For information or to order, contact Kamasoft Inc., 2525 S.W. 224th Ave., Aloha, OR 97006; 503/649-3765.

GO EBB or circle 30 on the Reader Service Form.

Desktop Publishing

G.O. Graphics Inc. has introduced Deskset, a desktop publishing system targeted for users of conventional typesetting systems.

Deskset is a comprehensive package for the IBM PC and compatible computers and the Postscript equipped Laser printers. Features include page-oriented software with composition-quality aesthetics for justification, hyphenation and white space control. The software alone sells for $995, while a complete system — including an IBM PC with dual floppy disks, 256K RAM and a monochrome monitor, Apple LaserWriter with eight fonts, DeskSet software and connecting cable — sells for $9,495.

For information, contact G.O. Graphics Inc., 18 Ray Ave., Burlington, MA 01803; 800/237-5588 or 617/229-8900.

GO EBB or circle 28 on the Reader Service Form.

Macintosh Carry Case

Cover Craft has introduced a new Macintosh case called the Mac Plus.

The case features Velcro-closed pockets inside for the keyboard, mouse, cables and even the extra disk drive. An outside pocket is large enough for documentation and program disks. Retail price is $99.95.

For information, contact Cover Craft, 540 N. Commercial St., Manchester, NH 03101; 603/644-3555.

GO EBB or circle 31 on the Reader Service Form.

Datasave

Best Power Technology has introduced Datasave software to provide two-way communication between an IBM PC, PC-XT, PC-AT or compatible computer and the Micro-Ferrups uninterruptible power supply (UPS) backing it up.

Micro-Ferrups is an online UPS made by Best Power Technology. Equipped with Datasave software, the computer can talk to Micro-Ferrups. When a power failure occurs, a window will open automatically on the monitor to periodically display the estimated backup time remaining. If left unattended, Datasave will shut down the computer. Retail price of the software only is $50.

For information, contact Best Power Technology Inc., P.O. Box 280, Necedah, WI 54646; 800/356-5794, extension 104 (nationwide) or 608/565-7200, extension 104 (in Wisconsin).

GO EBB or circle 32 on the Reader Service Form.

LISP Update

Microsoft Corp. has introduced a new release of LISP, the language used to develop artificial intelligence programs and expert systems for applications, such as language translation, medical diagnosis and robotics.

LISP Version 5.1 is three times faster, lets users develop programs up to 8,000 lines and is designed to offer more Common LISP functions than any other implementation of LISP for the MS-DOS environment. Designed for MS-DOS or PC-DOS 2.0 or higher, LISP 5.1 retails for $250.

For information, contact Microsoft Corp., Customer Service Department, 10700 Northup Way, Box 97200, Bellevue, WA 98009; 206/828-8080.

GO EBB or circle 33 on the Reader Service Form.

Spanish Spelling Checker

Ibersoft Inc. has released Escribien, the first spelling checker for the Spanish language. Versions have been released for Multimate, Word Perfect and WordStar.

Escribien has the ability to conjugate any verb in the dictionary, whether regular or irregular. The program is available for the IBM PC, PC-XT, PC-AT, PCjr and compatible computers with 128K. Retail price is $129.95.

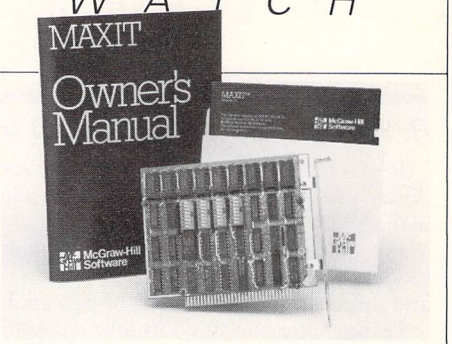
For information or to order, contact Ibersoft Inc., P.O. Box 3455, Trenton, NJ 08619; 609/890-1496.

GO EBB or circle 34 on the Reader Service Form.

Memory Card

Maxit, a memory card with software that expands available memory on an IBM PC, PC-XT, PC-AT or compatible microcomputer, has been released by McGraw-Hill Software for $195.

Maxit extends personal computer memory beyond the 640K limit, increasing by up to 256K the available work space for a spreadsheet created with Lotus 1-2-3. The software includes a driver that allows the memory card to emulate costly expanded memory boards. Maxit memory is parity-checked.



For information or to order, contact McGraw-Hill Software, 8111 LBJ Freeway, Dallas, TX 75251; 214/437-7422.

GO EBB or circle 35 on the Reader Service Form.

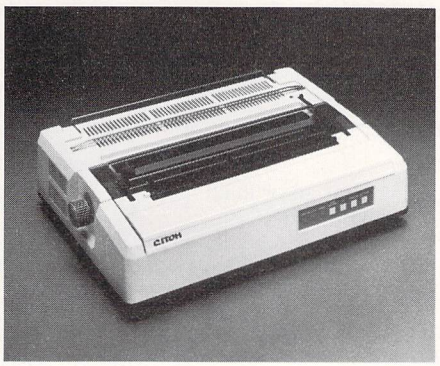
Disassembler Toolbox II

Disassembler Toolbox II from The Sourceview Corp. has been released for CP/M computers.

The program, which sells for $99, serves as an aid in documenting and debugging programs as well as assists in machine language programming. Disassembler Toolbox II provides 25 separate commands; each command is accessed by a single letter and may be followed with address and data. It runs under any memory size and automatically locates itself to the upper end of memory.

For information, contact The Sourceview Corp., 835 Castro St., Martinez, CA 94553; 415/228-6220.

GO EBB or circle 36 on the Reader Service Form.



C. Itoh Daisywheel

A new 136-column, Diablo 630-compatible daisywheel printer with a speed of 40 characters per second has been introduced by C. Itoh Digital Products.

Called the D10-40, the new printer has an acoustic noise level of less than 60db and features three character pitches, allowing the creation of spreadsheets up to 203 columns wide, compatibility with the entire range of Diablo printwheels, 8-bit parallel and RS-232C serial interfaces and an 8K data buffer. Retail price is $949.

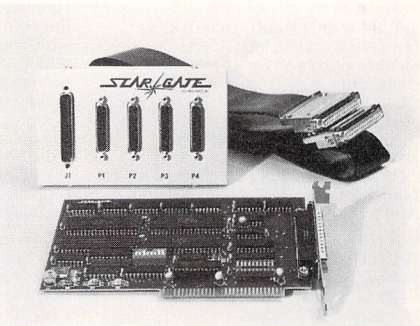
For information, contact C. Itoh Digital Products, 19750 S. Vermont, Suite 220, Torrance, CA 90502; 213/327-2110.

GO EBB or circle 37 on the Reader Service Form.

Expansion Module

Star Gate Technologies Inc. has introduced the OC4400, a flexible adapter board with four serial communication ports that expand the operation of the IBM PC, PC-XT, PC-AT and compatible computers.

The module features a remote panel with connectors compatible with the IBM asynchronous module, containing a full complement of modem control signals. With the OC4400, the computer can tie into modem phone lines, monitor fire alarms and security systems, connect remote terminals for data entry, and communicate with mainframes and peripheral devices.



For information, contact Star Gate Technologies Inc., Suite 109, 33800 Curtis Blvd., Eastlake, OH 44094; 216/951-5922.

GO EBB or circle 38 on the Reader Service Form.

SHOPPER'S GUIDE

RATES & INFORMATION

If you have hardware, software or services to offer *Online Today*'s readers, let them know with a low cost Shopper's Guide listing.

For only $85, a listing will tell *Online Today*'s growing readership what is available to improve efficiency, lower costs and increase the enjoyment of personal computing.

Listings are classified in four categories: Software, Services, Consultants and Retailers. As each listing is received, it will be published in the next available issue of *Online Today*.

Each listing costs $85. This covers the general listing information as well as a 40-word description of the product or service. Additional words are $15 for up to 15 words. Listings that run for three or more consecutive issues earn a 10 percent discount. Payment *must* be received with listing information.

The following is a guide to the type of information to include in a listing:

Software:
Product name; author and/or company's name; mailing address; telephone number; CompuServe User ID number; up to 40 words describing your products.

Services:
Type of service; company name; mailing address; telephone number; CompuServe User ID number; up to 40 words describing your services.

Consultants:
Company and individual contact name; mailing address; telephone number; CompuServe User ID number; up to 40 words describing your products and services.

Retailers:
Company name; individual contact name; mailing address; telephone number; CompuServe User ID number; up to 40 words describing your products and services.

You may use the enclosed card when ordering your ad or mail your information with payment to *Online Today* Shopper's Guide, P.O. Box 639, Columbus, Ohio 43216-0639.

SOFTWARE

RACING HANDICAPPING
Software Exchange
P.O. Box 5382-OL
W. Bloomfield, MI 48033
313/626-7208
CompuServe 70215,460

$$WIN with THOROUGHBRED, HARNESS, GREYHOUND handicapping software . . . $29.95, enhanced . . . $49.95. Up to 12 entries analyzed: track lengths, speed, times, post, stretch and finish positions. SPECIFY disk/tape and Apple II+/IIc/IIe, Atari, IBM PC, Commodore 64/128, TI-99/4A, TRS-80 Model III/4, Color, Model 100/200. Add $2 postage and handling.

WILKES DATABASE
(FOR IBM PC)
Wilkes Software
5231 Longwood Dr.
Memphis, TN 38134
Voice 901/386-4712
CompuServe 76556,3121

Paint screens to create/view/update/delete/sort/search/print/reformat/arithmetically manipulate new or extant files. ASCII, 16/32 bit integers, 32/64 bit floating point data formats. Powerful key sort and report formatting. $325. Demo $40.

PRO FOOTBALL ANALYST™
GE Ridge Services, Inc.
170 Broadway, Suite 201-OL
New York, NY 10038
1-800-341-1950 Ext. 77

Handicap NFL/USFL games against the point spread easily and profitably with your computer! Only 5 minutes/week and your local newspaper is needed to uncover hidden overlays in the betting line. Winning season GUARANTEED! $34.95 (+4.55 s&h) IBM, C64/128, TI99/4A. Catalog.

LOTTO PICKER™
GE Ridge Services, Inc.
170 Broadway, Suite 201-OL
New York, NY 10038
800/341-1950 Ext. 77

LOTTO! PICK-4! Daily Numbers! Win Million Dollar Jackpots! LOTTO PICKER improves your odds for winning by eliminating bias from your selections. All U.S. State & Canadian games included. Programmable! Never Obsolete! IBM PC, compatibles, C64/128, TI99/4A. $29.95 (+3.55 s&h) MC, VISA, AMEX accepted.

ARTificial ART
ARTWARE & SOFTWARE
825 W. End Ave. 15e
New York, NY 10025
212/316-2661
CompuServe 75025,01354

Imagine being entertained by an endless sequence of animated pictures. More than a kaleidoscope — includes many styles, decorative clocks, sound, captures pictures from/to disk and more. IBM PCs or compatibles with color monitor. $25 check or money order.

C P R SYSTEM
Computerized Patient Record System
FUTURE TECH
75-5722 Kuakini Hwy., #213
Kailua-Kona, HI 96740
808/329-1015 8:00 a.m.-1:00 p.m.
CompuServe 72166,2762

Paperless patient files! For MDs, Chiropractors, Veterinarians and Podiatrists. Uses a portable for daily visits, a PC for file storage. Creates H&Ps, files data, searches, generates reports and more. Complete system. MS-DOS ver. 2.0, BASIC, hard disk. $99.95 VISA/MasterCard.

PROBALOTO™
C. Gary Olander
322 Haymarket Pl.
Gahanna, OH 43230
614/475-3315 after 5:00 p.m.
CompuServe 74126,3522

The PROBABILITY Lottery program. Select numbers weighted towards the most or least picked in the past drawings, or totally random. Any number lottery, pick 3&4 too. See national reviews in Rainbow (Oct. 85), Computer Shopper (Jan. 86) and PCM (May 86) magazines. MS-DOS IBM AT&T Tandy 1000 and CP/M $29.95, TRS-80 CoCo and Model 3/4 $19.95.

FINANCE MANAGER II
General Ledger
Hooper International
Dept. O
P.O. Box 6009
Vancouver, WA 98668-6009
206/256-6361

An easy to use small business/personal finance package for IBM PC. Thousands of users. Menu driven, easy setup, complete reports, budgets, graphs, double entry, simple inputs. Tracks income, expenses, assets, liabilities, net worth. Demo files included. Try evaluation copy with manual on disk for only $10. Registered copy with printed manual $65. VISA/MC/Amex.

SERVICES

THE COMPUTER LISTING SERVICE INC.
1603 Shotwell Lane
Round Rock, TX 78664
512/388-1105

Get instant access to our database of over 5,000 computer companies products, services and software, by voice or modem. Mainframes to PCs, PC cards & software; DEC, HP, WANG, New/Used and more. We know who has the best price on what you want TODAY!

DISCOUNT TRAVEL AGENCY
Explorers World Travel, Inc.
34 E. Center
Lake Bluff, IL 60044
800/672-3274
EasyLink 62228990
CompuServe 73147,2265

Get back up to half the commission we earn handling your travel: 5%+ on airline tickets, highly competitive rates on all cruises, tours or individually arranged trips. Access us for an update to your mailbox or call toll-free.

COMPUTER BROKERAGE CENTER
A div. of International Offices, Inc.
740 Perrine Ave.
Miami, FL 33157
305/252-0942/43
Toll Free 800/525-0129 Ext. 3009
In Florida 800/332-2049 Ext. 3004

Buy, sell or trade used computer systems, printers, software and accessories through our national network. IBM, Apple, Tandy, AT&T, Commodore, Kaypro, Atari, clones, etc. It cost you nothing to list with us, so call us toll free (24-hrs.)

HUMAN SEXUALITY
(Online Magazine and Support Groups)
(Martha) Get latest facts.
(Howard) Make new friends.
(Martha) GO HSX on CompuServe.

Our readers write: (Eric, 33) The Singles Club on your forums is great! . . . (Fred, 24) I learned a lot about herpes. . . . (Vince, 21) Thanks for this database. I'm sure we all appreciate what you're doing. . . . (Steve, 21) Your Online Transcript on how to do a self-check for cancer of the testicles literally saved my life! . . . (Frank, 40) Your Interactive program "How Self-Conscious Are You?" was a lot of fun and taught me a lot about myself. My wife hates everything to do with computers, but I bet she'd enjoy this. . . . (Phil, 16) Thanks for answering my Hotline question the very next week.

HARDWARE

DATA LINE PROTECTOR
Plymouth Books Etc.
P.O. Box 1057
St. Helens, OR 97051-0908
EasyLink 62839602
CompuServe 72247,2064

Phone and communication transmission lines are subject to many of the same surge sources as power lines. SURGE SENTRY monitors data lines continuously and absorbs surges before they can harm your modem, micro, telephone, etc. Modular. $69.95; $59.95 ea/3+

GENERAL

IHS BROKER
E. Boykin
3106 Belleview Ave.
Cheverly, MD 20785
301/322-7964

How to make a big monthly income part-time. Be a broker for international home shopping. Minimum cash needed (under $50). Work in your home and earn many dollars, profits, extra bonuses — $2,000 to $40,000. Call IHS Broker.

INFORMATION

The advertisers and manufacturers of the products appearing in Online Today *will be pleased to send additional information about their products or services — at no cost to you. Make your selection by circling the advertiser or product by number on the form below. Fill in the requested information and mail to:* Online Today, *Reader Service Management Dept., P.O. Box 376, Dalton, MA 01227-0376.* Online Today *will see that your requests are forwarded promptly. You may get a faster response by using the Electronic Bounce Back reader service system. Simply enter GO EBB at any prompt on the CompuServe system and follow the EBB prompts. Your request will be forwarded.*

Inquiry Number	Advertiser/Product	Page Number
18	American River Software	34
13	Amdek Corp.	30
32	Best Power Technology	45
5	CACI	15
37	C. Itok Digital Products	45
25	Codex Corp.	44
22	Communication Electronics	39
2	CompuServe	1
31	Cover Craft	44
17	Electronic University	33
12	Fidelity Brokerage Service	29
28	G.O. Graphics Inc.	44
3	Grolier Electronic Publishing	5
8	Hallmark Color Mail	23
19	Hayden Software Co.	34
7	Heath Kit	19
34	Ibersoft Inc.	45
21	Infostructure Inc.	36
30	Kamasoft Inc.	44
20	Lifetree Software Inc.	36
35	McGraw-Hill Software	45
15	Max Ule	31
42	Max Ule	7
33	Microsoft	45
1	NewsNet	Cover 2
24	Northeastern Software	42
39	Official Airline Guide	Cover 3
16	Paperback Software	32
6	PaperChase	17
26	Penril DataComm	44
11	Quadram Corp.	28
9	Quick & Reilly	25
23	Smith Advertising Specialties Inc.	41
38	Star Gate Technologies	45
36	The Sourceview Corp.	45
10	Unified Management Corp.	27
40	Universal Data Systems	Cover 4
4	U.S. Robotics	9
29	U.S. Robotics	44
14	Votrax Inc.	31
41	Vu/Text	37
27	Walonick Associates	44

READER INQUIRY

For free information on products or services in this issue of *Online Today*, fill in your name, address, zip code and phone number. Then circle the number that corresponds to the number of the advertisement or article in which you are interested.

CompuServe subscribers can request information electronically by entering GO EBB at any prompt.

(Please print or type)

Name _____

Company Name _____

Address _____

City _____

State _____ Zip _____ Business Phone _____

Mail to: Online Today, Reader Service Management Dept., P.O. Box 376, Dalton, MA 01227-0376.

Circle inquiry number from this issue only

1	21	41	61	81
2	22	42	62	82
3	23	43	63	83
4	24	44	64	84
5	25	45	65	85
6	26	46	66	86
7	27	47	67	87
8	28	48	68	88
9	29	49	69	89
10	30	50	70	90
11	31	51	71	91
12	32	52	72	92
13	33	53	73	93
14	34	54	74	94
15	35	55	75	95
16	36	56	76	96
17	37	57	77	97
18	38	58	78	98
19	39	59	79	99
20	40	60	80	100

July issue, not valid after October 1986.

Jargon Creates Confusion

In the world of computers, we often are accused of letting jargon obscure the points we are trying to make.

In truth, it is hard to make a case for the defense when we surround ourselves with such verbal cream puffs as "user friendly interfaces" and "integrated software engines."

Jargon is deadly to communications. Like any slang, it tends to *exclude* from the conversation all newcomers who dare approach us without their phrase books.

But worse, it hurts the rest of us, too. I suspect that our infatuation with jargon is succeeding in taking the edge off those authentic technical terms we need to make real distinctions in our community.

In fact, it seems to me that the general lack of understanding of a few such technical terms — perhaps dismissed as merely so much more jargon — has resulted in misleading reports in the press that the entire world of computer communications must surely be dying.

Case Number 1:

In January, the publisher of the Ohio newspaper the *Troy Daily News* ended six years of experimentation with electronic delivery of written words in its TDN Cable News project. When this noble, historic effort ceased, a major wire service quoted an official with the project as saying, "People might want to read a newspaper in front of them, but they don't want to read text on a screen."

Well, now, you and I read text on the screen all the time on CompuServe, The Source, Dow Jones News/Retrieval and other systems. Does that mean that we are on a sinking ship?

Hardly. The latest figures say that those services — and a wide range of newcomers — are growing dramatically. So much so that electronic publishing as a medium seems to have a bright future. So what gives?

What the wire service neglected to note was that the TDN Cable News was teletext, not videotex, which we are used to visiting. In other words, the project presented words on the screen all right, but gave the readers little or no control over which stories they were shown. (If you have your decoder ring handy, that means it was not "interactive.") Such a system might have been just dandy for 1980 when it began, but computer communications have done some powerful changing since then.

Unfortunately, the casual observer of the passing scene did not pick up on that distinction, because two authentic technical terms — teletext and videotex — were not explored in the news accounts.

Case numbers 2 and 3:

In March, two more newspaper groups, within 10 days of each other, reported they, too, were ending their online experiments:

After four years of research and 15 months of testing, California's Times-Mirror closed down its Gateway project.

Then Knight-Ridder, which had put an estimated $60 million and nearly three years' work into the Florida-based Viewtron, said it also was calling it quits.

Suddenly, the press was filled with more hand-wringing over whether what we do with our modems has "a future" commercially.

In reaction to the Gateway announcement, a New York securities analyst got ink in hundreds of newspapers when he was quoted this way by a press service:

"You've got 5,200 catalogs coming in the mail every day and everybody's got an 800 toll-free number, so why should consumers learn how to use videotex? Videotex is providing a service that has too many alternatives that are cheaper and easier."

And no less a financial authority than *The Wall Street Journal* quoted a Viewtron executive as saying:

"It is clear the American public is not ready to support a videotex service at a level that would justify the continuing expense."

Once again, though, a technical distinction was glossed over. It was not the videotex-teletext bugaboo this time — both Gateway and Viewtron were videotex all right.

However, the point the general press missed was that the demise of these services did not herald the death of all of videotex — but rather the apparent illness of a particular *kind* of videotex.

You see, both Gateway and Viewtron used — got your verbal filter ready again? — a format called the "North American Presentation Level Protocol Syntax" (NAPLPS). That simply means that instead of the text-based (ASCII) presentation you and I are accustomed to on information services like CompuServe, these systems emphasized high-level graphics.

For more than five years, there has been debate in the information industry over whether online subscribers have the patience to wait for a service to "paint" a screen worth of pictures using NAPLPS, or whether they really want to get down to the facts with text. Just about everyone conceded that NAPLPS drew great pictures, but it ate up connect time doing it. And it usually required subscribers to buy special software or hardware to see the graphics.

To my mind, the Gateway-Viewtron failures end that discussion — or at least they should. And that seems to be what the seers at New York's Link Resources Inc. meant (in a comment that was, unfortunately, drowned out in the exaggerated reports of our medium's demise): The end of Gateway and Viewtron, they said, represented more a "severe setback for the NAPLPS industry" than for videotex as a whole.

Videotex analyst Gary Arlen, in another comment sadly overlooked by the general media, concurred, saying, "There is still evidence that consumers will buy a videotex product that is transactional in nature (and) not graphics-oriented."

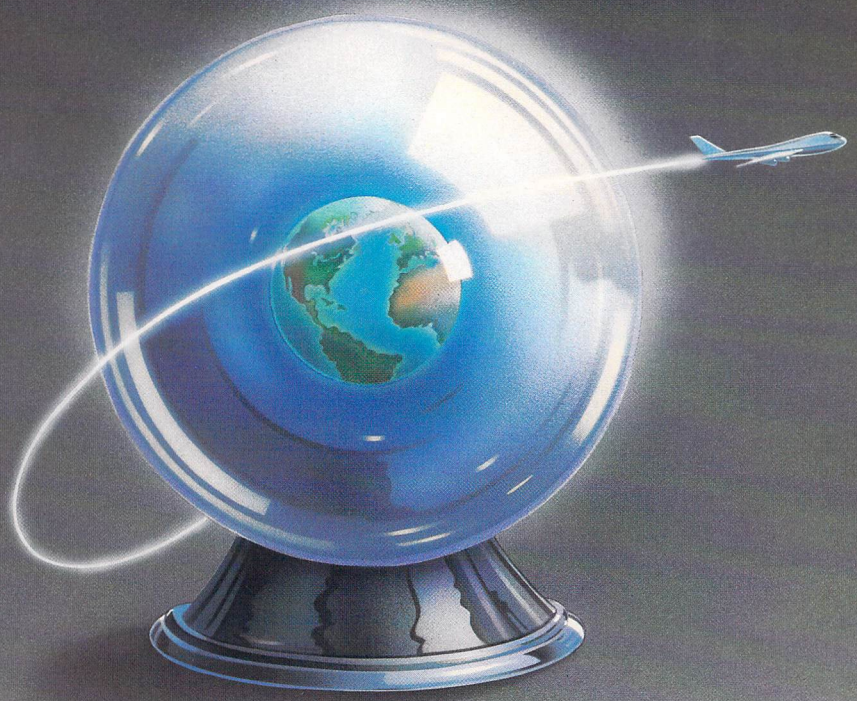
Is the computer industry itself responsible if our brethren in the media miss the subtlety of our technical terms and draw unfair conclusions like these?

Obviously, we are not directly, individually accountable. However, I think the industry has to acknowledge it makes gratuitous use of jargon. Every new product has to have a new term as well. It simply can not be a new word processor; it has be to a "textual analyzer." A program that assists in writing outlines is a "thought processor." Every new program these days is "dynamic" and "integrated." We are even seeing "artificial intelligence" being used to describe any bit of clever programming.

I am afraid the computer industry, allowing its precision tools — its *authentic* technical words — to be dulled by all this hyperbole, has less room to complain when the outside world wearies of trying to make the distinctions.

Charles Bowen is a contributing editor of Online Today. *His CompuServe User ID number is 70007,411.*

NOW YOU CAN PREDICT THE BEST FLIGHTS AND FARES WITH THE OAG ELECTRONIC EDITION. . .



YOUR TRAVEL PLANNING AND RESERVATION SYSTEM!

If there's travel in your future, it takes more than a crystal ball to find the best fares . . . and the most convenient flights.

It takes the OAG ELECTRONIC EDITION . . . today's most complete, unbiased, up-to-date air travel and reservations system.

You can select the most convenient flight, find the best fare, book a reservation, arrange for ticketing, even view worldwide hotel and motel information . . . on GO OAG through CompuServe!

Choose the best fares . . . the most convenient flights!

The OAG ELECTRONIC EDITION helps put your travel in focus! You get schedules for virtually every direct and connecting flight in the world. Plus thousands of North American and international fares. . . including the latest airline discount fares. And because OAG supplies schedule and fare data to airline reservation systems around the world, you know you're getting the most complete and accurate information.

The OAG Electronic Edition is also the only source for truly unbiased information: No preference is given to any airline because fares are listed from lowest to highest; schedules are displayed from earliest to latest.

Find Fares that are linked to Flight Schedules!

No other electronic travel system links flights and fares together - so you can easily choose the least expensive fare on the most convenient flight. You can choose the lowest fare and then ask to see flights for that fare. Or request a list of flights first and then view only the fares that apply. This feature allows you to compare fares at a glance. . . You may find a flight that leaves 15 minutes earlier. . . and saves you hundreds of dollars. Or upgrade from coach to first class and actually come out ahead! You can also check to see if you can travel mid-week instead of peak travel days. . . or stay over an extra night. . . at significant savings. You may even find that you can ticket your trip 7 days in advance to take advantage of lower fares.

Then book your flight and arrange for ticketing!

When you find the flight you want, it's easy to make a reservation through the OAG Electronic Edition. You can book a flight on any airline in the world when you have your tickets delivered by Thomas Cook Travel U.S.A., also a company of the Dun & Bradstreet Corporation, and the OAG Electronic Edition's exclusive travel agency.

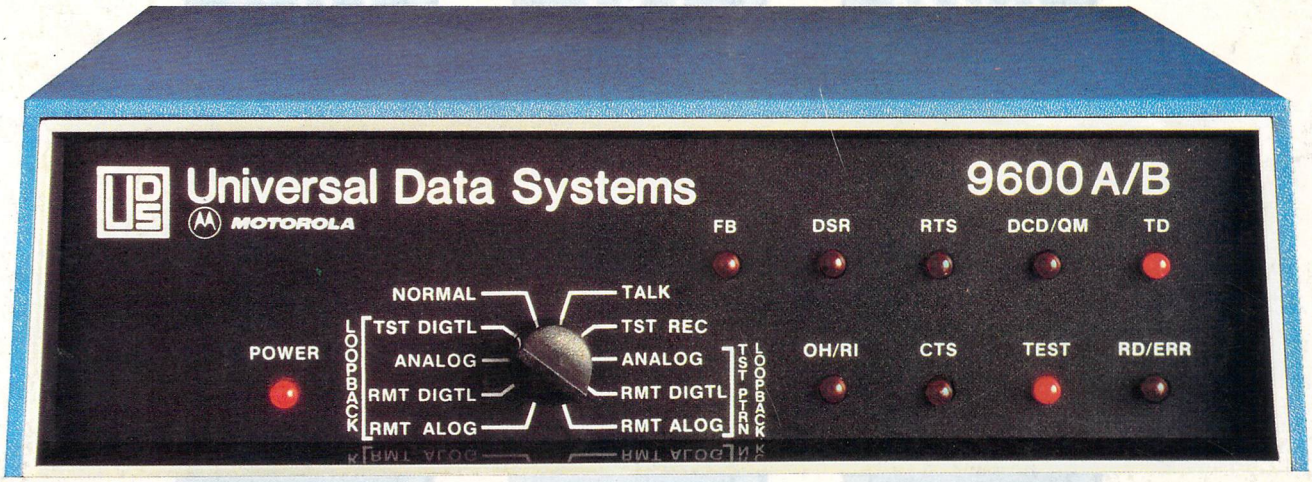
And—you can even check out hotel and motel information throughout North America, Europe and the entire Pacific Area . . . in minutes!

So don't leave your travel planning to chance! Leave it to the OAG Electronic Edition. Use GO OAG on CompuServe today!

Official Airline Guides

a company of The Dun & Bradstreet Corporation

GO EBB or circle 39 on the Reader Service Form.



Dial Now, Dedicate Later at 9600 bps

Take your datacomm system to 9600 bps *now.* You can do it with UDS 9600A/B modems! Buy them today and instantly speed up your system *on the dial-up network.* Later, when traffic growth demands an upgrade, three simple strap changes will adapt your modems to dedicated lines.

The UDS 9600A/B provides optional data rates of 7200 and 4800 bps. Communication may be half-duplex (two-wire) or full-duplex (four-wire, V.29). A wide range of integral test capabilities simplifies system diagnostics.

Don't wait to accelerate your datacomm system throughput. Dial-up or dedicated, you can move to 9600 bps now. For complete details, contact Universal Data Systems, 5000 Bradford Drive, Huntsville, AL 35805. Phone 205/721-8000. Telex 752602 UDS HTV.

QUANTITY ONE PRICE $1,995

Universal Data Systems
MOTOROLA INC.
Information Systems Group

UDS modems are offered nationally by leading distributors. Call the nearest UDS office for distributor listings in your area.

DISTRICT OFFICES: **Atlanta,** GA, 404/998-2715 • **Aurora,** CO, 303/368-9000 • **Blue Bell,** PA, 215/643-2336 • **Boston,** MA, 617/875-8868 • **Columbus,** OH, 614/895-3025 • **East Brunswick,** NJ, 201/238-1515 • **Glenview,** IL, 312/998-8180 • **Houston,** TX, 713/988-5506 • **Huntsville,** AL, 205/837-8100 • **Issaquah,** WA, 206/392-9600 • **Mesa,** AZ, 602/820-6611 • **Milwaukee,** WI, 414/273-8743 **Minnetonka,** MN, 612/938-9230 • **Mountain View,** CA, 415/969-3323 • **Richardson,** TX, 214/680-0002 • **St. Louis,** MO, 314/434-4919 • **Silver Spring,** MD, 301/942-8558 • **Tampa,** FL, 813/684-0615 **Thousand Oaks,** CA, 805/496-3777 • **Tustin,** CA, 714/669-8001 • **Uniondale,** NY, 516/222-0918 • **Willowdale,** Ont, Can, 416/495-0008 • **Ypsilanti,** MI, 313/483-2682

Created by Dayner/Hall, Inc., Winter Park, Florida
GO EBB or circle 40 on the Reader Service Form.